

The Current Status of Digital Currency Development in China

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Abstract: Digital currencies, as innovative products in the field of financial technology, are characterized by their decentralized structure and strong encryption based on blockchain and other technologies. Although your mention of ‘relying on local area networks’ may be a bit of a misnomer in the broad sense, as the operation of digital currencies relies more broadly on the Internet rather than a single local area network, the concepts of digital encryption and decentralization it emphasizes are accurate. Legal digital currencies, such as the Digital Currency Electronic Payment (DCEP) issued by the People's Bank of China, represent a milestone in this field. They not only integrate the security and transparency of blockchain technology but also achieve a perfect combination of controllable anonymity and legal tender status through the deep integration of the generalized account system with the banking system. The issuance of DCEP marks an important step forward for China in the field of digital currencies and is expected to have a profound impact on the financial market, promoting the modernization and upgrading of the payment system, enhancing transaction efficiency and security, and at the same time, providing the public with more convenient and secure payment options, further integrating into and changing people's daily lifestyles.

Keywords: digital currency, current status, countermeasures, impact.

1. Introduction

Amidst the digital tide of the 21st century, digital currencies, as a pivotal innovation in the realm of financial technology, are progressively reshaping the global financial landscape. China, a pivotal driver of the global economy, has taken the lead in launching the Digital Currency Electronic Payment (e-CNY), marking a significant step forward in the digital currency domain and sparking widespread international attention and discourse.

This paper endeavors to delve into the current status, characteristics, and profound implications of China's digital currency, the e-CNY, on economic and social structures. By contrasting traditional monetary systems with digital currencies, we aim to uncover the unique advantages of e-CNY in fostering financial inclusion, enhancing transaction efficiency, and bolstering financial security. Simultaneously, we will confront the challenges posed by the adoption of e-CNY, including privacy protection, cybersecurity, and the refinement of regulatory frameworks, to provide insights and guidance for policymakers, financial institutions, and various sectors of society.

As the digital economy thrives, digital currencies have emerged as an irreversible trend. China, as a pioneer in the digital currency realm, its practices and explorations with e-CNY not only hold

significance for the development of its own financial system but also offer valuable experiences and lessons for the future evolution of global digital currencies. Consequently, this research not only deepens our understanding of the essence and impacts of digital currencies but also contributes to the innovation and advancement of the global financial system.

2. The Development History of Digital Currency

Initially, there was no currency, and people exchanged goods for the items they needed through barter. Gradually, this developed into the use of a general equivalent for exchange, and then the general equivalent was fixed as gold and silver. The emergence of paper currency was an important event in history, and the Jiaozi in the Northern Song Dynasty was the earliest paper currency used in the world. Paper currency is lighter and more portable than metal currency, making it easier to circulate. After the first millennium, most countries in the world gradually transitioned to the use of paper currency, and with the emergence of legal financial institutions such as central banks, paper currency gradually gained acceptance by the people. With the prosperity of the Internet technology in the fourth industrial revolution, the rapid development of virtual currency has attracted the attention of governments around the world. In 2019, China officially issued digital renminbi and conducted pilot projects in developed cities and provincial capitals such as Shenzhen, Suzhou, and Chongqing, adapt to the development of the times.

In the early 2000s, the concept of digital currency was introduced, primarily with the emergence of Bitcoin, the world's first decentralized cryptocurrency. Bitcoin's blockchain technology revolutionized the way this study think about money and transactions, providing a secure and transparent way to transfer value without relying on traditional banks or financial institutions.

Since then, digital currency has evolved rapidly. this study have witnessed the emergence of numerous cryptocurrencies, each with its own unique features and use cases. The industry has also seen significant innovation in terms of scalability, privacy, and interoperability, all aimed at improving the efficiency and usability of digital currencies.

China, a global leader in digital currency development, has taken a unique approach with the introduction of the Digital RMB (e-CNY). This digital currency is backed by the central bank and designed to coexist with traditional cash, providing an alternative payment method for individuals and businesses. The Digital RMB's adoption has been growing rapidly, as more people realize its convenience and benefits.

In summary, the development history of digital currency has been a remarkable journey, driven by innovation, experimentation, and the quest for a more efficient and inclusive financial system. As this study move into the future, digital currency is poised to continue evolving and transforming the way this study conduct financial transactions.

3. The Current Status of Digital Currency in China

3.1. Lack of Advanced Technology

Digital currency, which has only emerged in recent years, has received considerable attention, but its short emergence time and insufficient related laws and regulations have posed challenges. Additionally, the technological level related to digital currency is not yet mature, resulting in risks and security issues during circulation. While some enterprises like Tesla and related organizations accept Bitcoin for settlement, China still maintains a reserved attitude towards it. If the technology is not perfected, hackers may infiltrate and steal account passwords, causing significant property losses. China's digital currency ecosystem is supported by cutting-edge technology and continuous innovation. The Digital RMB utilizes blockchain technology, ensuring the security and transparency of transactions. At the same time, Chinese technology companies and financial institutions are

actively exploring new use cases and applications for digital currency, driving further innovation and development. For example, some platforms are integrating digital currency into their mobile payment systems, making it even more convenient for users to make payments.

3.2. Incomplete Legal Regulations

Although there are laws and regulations concerning digital currency in the market today, digital currency is a relatively new product that has emerged in recent decades, and there are always some loopholes that cannot be considered by laws and are exploited by those with ill intentions. Digital currency, with its characteristics of being invisible and easy to carry, is likely to become a new carrier for money laundering activities. Digital currency implements peer-to-peer settlement methods, bypassing third-party institutions to a certain extent, and existing anti-money laundering detection methods cannot fully and effectively prevent it. Nowadays, the behavior of stealing credit cards and savings cards still exists, and it is difficult to recover the stolen money in most cases. Digital currency is likely to be even more difficult to monitor. Most current laws and regulations are targeted at physical currency, and there are no comprehensive regulations for digital currency, a virtual currency[1].

3.3. Low Public Acceptance

Despite the significant progress made in China's digital currency landscape, there remains a considerable level of low public acceptance. This reluctance to adopt digital currency can be attributed to a variety of factors.

Firstly, many individuals in China are accustomed to traditional payment methods like cash and bank cards. The shift to digital currency requires a change in habits and familiarity with new technology, which can be daunting for some. The lack of direct experience and understanding of digital currency's benefits further compounds this reluctance.

Secondly, security concerns are a significant barrier to public acceptance. While digital currency utilizes advanced technology to ensure transaction security, there are still fears about potential risks such as hacking and fraud. These fears, coupled with a lack of trust in new financial systems, can deter people from using digital currency.

Furthermore, the lack of widespread education and awareness about digital currency also contributes to low public acceptance. Many people in China may not be fully informed about the benefits, features, and use cases of digital currency. This lack of knowledge makes it difficult for them to make informed decisions about whether to adopt this new payment method.

In summary, low public acceptance of digital currency in China is a complex issue that requires a multifaceted approach to address. By increasing education and awareness, alleviating security concerns, and providing convenient and accessible options for digital currency use, China can foster greater acceptance and utilization of this innovative payment method.

3.4. Social and Economic Impact

Finally, the development of digital currency in China is having increasingly significant social and economic impacts. By providing a convenient, efficient, and secure payment method, digital currency is helping to promote economic growth and digitalization in the country. It is also enabling financial inclusion, allowing more people to access financial services and participate in the economy. In addition, digital currency is helping to reduce the costs and risks associated with traditional payment methods, further enhancing its appeal and adoption[2].

In conclusion, the current status of digital currency in China is promising and exciting. With a robust regulatory framework, widespread adoption, technological innovation, international

cooperation, and significant social and economic impacts, digital currency is poised to play an increasingly important role in China's financial sector and economy.

4. Impacts of the Digital Currency Issued by the Central Bank

4.1. Positive Impacts

4.1.1. Digital Currency Enables Offline Payments

If the internet malfunctions, payment methods like Alipay and WeChat Pay will become unusable. However, as long as your phone has battery, digital currency payments will not be affected. This means that whether people are on a plane or in a high-speed train passing through a tunnel, they can still pay for the goods they want. This greatly facilitates people's lives.

4.1.2. Improves the Accuracy and Efficiency of Market Feedback Information

Currently, domestic consumers rarely use cash in daily life, and instead rely more on payment platforms like WeChat and Alipay. Behind these quick payment methods are still bank cards from commercial banks, and essentially, they still cannot bypass third-party institutions. The digital currency launched by the central bank realizes peer-to-peer settlement without relying on third-party institutions. Relevant departments can obtain more accurate data more quickly and easily, and the analyses and policies based on these data will also be more effective[3].

4.1.3. Enhances Deposit Security

Both WeChat and Alipay payments require binding to bank cards from commercial banks. These banks, theoretically, may face bankruptcy. People's deposits in rural banks in Henan cannot be withdrawn, and while the probability of bankruptcy for large state-owned enterprises is extremely low, it is not impossible. From a security perspective, the central bank is obviously several levels higher.

4.1.4. Reduces the Costs of Issuing, Circulating, and Destroying Traditional Paper Currency

According to the Federal Reserve's statistical information on the US dollar, the average life cycle of non-polyester dollar bills classified by denomination is only 6.9 years, and the average life cycle of coins is 25 years. Once paper money reaches its service life, it will be recycled, shredded, and pressed into bricks, then sent to government-designated incinerators for burning[4]. Water consumption, waste ink and pulp sludge, electricity used in printing and pulp manufacturing, metal mining, and coin minting all consume resources during paper production and printing. The impact of paper money and coins on the environment further increases the cost of using physical currency. Once the environment is polluted, it is extremely difficult to restore it to its original state, requiring not only a large amount of money but also an incalculable cost of time.

4.1.5. Driving Innovation and Economic Development

The application of digital currency not only promotes innovation in the financial sector but also positively impacts the entire economy. Firstly, the introduction of digital currency stimulates innovation vitality in financial technology. Financial institutions and technology companies have devoted themselves to the research, development, and application of digital currency, promoting the rapid development of financial technology. Secondly, the popularity of digital currency promotes the development of emerging industries such as e-commerce and mobile payments. In China, with the

widespread application of digital currency, more people are choosing online shopping and mobile payments, which not only drives the prosperity of e-commerce but also boosts the rapid development of related industries. Finally, the application of digital currency helps optimize monetary policy transmission mechanisms and improves monetary policy effectiveness. Through digital currency, central banks can more precisely control the money supply and circulation speed, achieving precise monetary policy regulation.

4.2. Negative Impacts

4.2.1. Incomplete Regulatory Laws and Regulations may Lead to Risks

Although there are laws and regulations regarding digital currency in the market today, digital currency is a relatively new product that has emerged in recent decades. There are always some loopholes that laws cannot consider, which may be exploited by malicious individuals. Digital currency, with its invisibility and portability, is highly likely to become a new carrier for money laundering activities. Digital currency implements peer-to-peer settlement, bypassing third-party institutions to a certain extent, and existing anti-money laundering detection methods cannot fully and effectively prevent it. Nowadays, the behavior of stealing credit cards and savings cards still exists, and it is difficult to recover the stolen money in most cases. Digital currency is likely to be even more difficult to monitor and trace.

4.2.2. Weakens the Traditional Business Functions of the Banking Industry

The digital currency issued by China's central bank is a legal currency with national credit guarantees that can be circulated and exchanged in the market. It also follows the general principle of "decentralization" of digital currency, meaning that it does not need to rely on any third party and can conduct free and convenient transactions on the internet based on its unique algorithms. This means that the functions of traditional commercial banks are weakened. As digital currency gradually gains popularity, people will no longer need to go to offline counters to handle business, and most issues can be resolved through the internet. Settlement, transfer, and other activities will exist in the form of digital currency, giving people more choices in payment methods and weakening the payment functions of commercial banks.

4.2.3. Causes Employment Difficulties for Banking Industry Employees

The development of digital currency has a significant impact on the employment of staff at traditional bank branches' offline counters. With the popularization of digital currency, people will reduce their frequency of visiting counters, just as after the popularization of mobile payments, most issues can be solved with a mobile phone, and people do not frequently go to relevant service windows for utility payments. To reduce operating costs, commercial banks will reduce their operating scale. Without physical currency, vaults, currency detectors, and other equipment will also gradually decrease, and related security service positions will be reduced, causing employment difficulties for relevant personnel.

4.2.4. Environmental Impact

The mining process of digital currencies, especially Bitcoin, is highly energy-intensive. This mining process involves solving complex mathematical problems using powerful computers, which requires a significant amount of electricity. In China, where coal-fired power plants provide a significant portion of electricity, the environmental impact of digital currency mining can be significant. The carbon emissions generated by digital currency mining not only contribute to climate change but also

pose a threat to the environment and public health. As digital currency gains popularity in China, the environmental impact of its mining process will become an increasingly important issue to address[5].

5. Policy Suggestions on Issuing Digital Currency in China

5.1. Increase Investment in More Advanced Technology

Digital currency, which relies on the Internet and emerged relatively late, faces issues such as technical vulnerabilities and imperfect operational technology, making it prone to the theft of user account passwords and causing financial losses to users. As the legal official currency of China, the safety of digital currency issued by the central bank is crucial to China's financial market and people's lives. Therefore, it is essential to ensure the security of transactions and storage. The central bank needs to strengthen the upgrading and maintenance of the secret protection system to prevent hackers from breaking through.

5.2. Increase Publicity Efforts for Digital Currency

Digital currency is a brand-new product that has emerged in recent years, and many middle-aged and elderly people, as well as teenagers, are not very familiar with it. They are relatively unfamiliar with the procedures required for the issuance and circulation of digital currency. This requires relevant departments to invest more time and energy in promoting and publicizing related policies during the initial stage of digital currency issuance to better enable people to accept digital currency and bring it into people's lives. Combining developed online media and offline promotional methods, this study can popularize the usage methods and operating skills of digital currency among the public, truly realizing the idea that digital currency is convenient for people's lives.

5.3. Improve Laws and Regulations Related to Digital Currency

As a legal currency, digital yuan can be revised and supplemented with content related to digital currency based on existing laws and regulations for physical currency, standardizing the ownership of digital currency and relevant departments. Establish a sound regulatory system to combat money laundering, tax evasion, and fraud, maximizing the protection of people's property security. As a new phenomenon, digital currency is bound to encounter some problems during its use, requiring timely improvements and perfection of laws and regulations. Therefore, relevant department personnel need to be flexible.

5.4. Strengthen Ties with Other Countries and International Organizations

China's economy is closely intertwined with the global economy, and win-win cooperation in the current world is the right choice. For digital currency, the laws and regulations of different countries may vary, and various countries and international organizations are accelerating the establishment of digital currency systems. Establishing good cooperative relations is conducive to combating cross-border illegal and criminal activities and building a sound international financial system.

6. Conclusion

The conclusion of China's digital currency development journey thus far is nothing short of remarkable. The Digital RMB, or e-CNY, has not only established itself as a viable alternative to traditional cash and bank payments, but it has also demonstrated its potential to reshape the financial landscape in China and beyond.

The rapid growth in wallet openings and transaction volumes speaks volumes about the popularity and convenience of the Digital RMB. As more and more individuals and businesses embrace this digital form of currency, it is becoming a crucial component of China's digital economy. This trend is expected to continue, further accelerating the digitization of payments and financial transactions in the country.

The diversification of application scenarios for the Digital RMB is another noteworthy aspect. From public services to transportation to cross-border payments, the Digital RMB is finding its way into various sectors, unlocking new opportunities and use cases. This diversification not only expands the reach and utility of the digital currency, but it also helps to address some of the challenges faced by traditional payment systems.

Moreover, the Digital RMB holds significant promise for international trade and finance. As China continues to explore the use of the digital currency in cross-border payments, it has the potential to revolutionize the way international transactions are conducted. This could lead to faster, more efficient, and more secure payments, ultimately benefiting both businesses and consumers.

In conclusion, the current status of China's digital currency development is both impressive and exciting. The Digital RMB has demonstrated its potential to reshape the financial landscape, providing convenience, efficiency, and security to its users. As China continues to push the boundaries of digital currency technology, it is likely that the Digital RMB will play an increasingly important role in the country's digital economy and beyond.

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