

Analysis of the Current Policy of China's Digital Currency

Yundi Zhang

Boston University, Boston, MA 02103 USA

yundi208@bu.edu

Keywords: Digital Currency, CBDC, SWOT, Fintech.

Abstract: With the development of science and technology and the rise of industrial digitization, countries worldwide have begun to develop digital currencies in currency circulation vigorously. Considering the impact of COVID-19 on the world market, the development of digital currency ushered in a new opportunity. This article aims to conduct a comprehensive qualitative analysis of China's digital currency (CBDC) by analyzing existing data. This article will use the SWOT model, which mainly provides strong support for the organization's core decision-making by enumerating the advantages and disadvantages within the organization and the opportunities and threats outside the organization. The data source of this article is the government work report of the People's Republic of China, which includes the Digital Currency Research Institute of the People's Bank of China, China Internet Network Research Center, and China Academy of Information and Communications Technology. By analyzing the current situation of China's digital currency, the author insists that the CBDC has achieved remarkable success and ushered incoming opportunities. However, digital currencies from other countries and private individuals have also brought challenges to digital currencies. Therefore, there is great reference value to systematically and qualitatively analyze the current situation of China's digital currency through SWOT research methods.

1. Introduction

The full name of CBDC is Central Bank Digital Currencies, China's CBDC is described as a digital CNY. Its main content is issued by the People's Bank of China and allowed to exchange all around China. It is based on a comprehensive account system and supports loose coupling of bank accounts. Its legal function is equivalent to banknotes and coins, and a controllable anonymous payment tool with value characteristics and legal compensation. DC/EP is the Chinese version of the central bank's digital currency. The full name is "digital currency and electronic payment tool," this is the main carrier for digital currency [1].

In 2018, Two authoritative international organizations, The Bank for International Settlements (BIS) and the Committee on Payments and Market Infrastructure (CPMI), jointly conducted questionnaire surveys on more than 60 central banks worldwide [2]. Digital CNY pilot areas, scenarios, and forms have gradually expanded, and payment models have been constantly updated. Digital currency can subsequently provide online financial products such as loans, wealth management, and insurance on the user side. The enterprise side can provide value-added services such as digital marketing and supply chain management. With China's digital currency development, summarizing successful experiences and analyzing the current situation is long-term development planning. With the development of digital currency as a new round of financial innovation in economies headed by the world's central bank, the development direction of China's digital currency has become more challenging [3].

1.1 Literature Review

The research methods of SWOT are involved in various fields. Frank Rothaermel pointed out in the "Strategic Management" in 2019 that the use of strategic & threats analysis requires various investigations to study the various environmental factors in which the company is located, namely external environmental factors and internal capability factors [4]. The external environment that

directly affects the company's development is objective factors, including different categories of economy, politics, society, population, technology, and market. Internal environmental factors are the active factors of the company's existence in its development and are generally classified for management, organization, operation, finance, sales, human resources, and other different areas. When investigating and analyzing these factors, we must consider the company's history and current situation and assess the company's future development.

Thorstein Veblen was the first to engage in SWOT research. In the "The Theory of the Leisure Class" first published in 1899 and noted by Martha Banta in 2007 [5]. Veblen proposed a way to sort the various factors from the investigation according to their priority or degree of influence. In this process, prioritize the direct, influential, and long-term influencing elements for the company's development and put the indirect, secondary, and short-term influencing factors behind. After completing the analysis and construction of environmental factors, a corresponding action plan can be worked out.

In 2008, Shen Yu pointed out that SWOT analysis is an effective method for analyzing enterprise competition in the "Application of SWOT Analysis in the Positioning of Regional Sustainable Development." [6] The essence of SWOT analysis is to audit the strategy, including internal audit and external audit. Internal audit is mainly through analyzing culture, customer satisfaction, human resources, leadership, management systems, market positioning, product development, and other factors to achieve the company's advantages and disadvantages. The external environment analysis is mainly the study of the industrial environment, economy, technology, law, government, consumers, and industrial structure. Porter's five types of competitiveness models in the industry are commonly used for industrial structure research: the threat of new competitors, the bargaining power of suppliers, the bargaining power of buyers, the threat of substitutes, and the competition among existing companies in the industry [7]. Finally, the internal and external are summarized to obtain the enterprise's competitive advantages or critical success factors to invest the limited resources in these target markets.

2. Data & Method

2.1 Data

The data sources in this article mainly come from reports from Chinese government departments, including the "Progress of Research & Development of E-CNY in China," and the source is a work report by the Central People's Government of the People's Republic of China [8]. "The 48th Statistical Report on China's Internet Development Status", the authoring department is China Internet Network Information Center (CNNIC) [9]. The "White Paper on China's Digital Economy" was released by the China Academy of Information and Communications Technology (CAICT) [10]. The other sources of the numbers listed in this article can be queried through the official websites of Chinese government departments. Their digital sources are highly credible and can fully represent the current development of China's digital renminbi and the digital economy.

2.2 Method

The SWOT analysis method is also known as the Dawes matrix. It was proposed by the management professor Weirick, which from the University of San Francisco in the early 1980s. It is often used in corporate strategy formulation, competitor analysis, and other occasions. The main part of SWOT includes Strengths, Weaknesses, Opportunities, and Threats of the analysis target. Therefore, SWOT analysis is a way to synthesize and summarize all aspects of the internal and external conditions of the subject, and then analyze the strengths and weaknesses of the organization, the opportunities and threats it will face in the coming future. In a specific case analysis, all internal factors-strengths and weaknesses-should be brought together, and external forces should be used to evaluate these factors. External forces refer to environmental development trends, divided into two categories: one type represents environmental threats, and the other represents ecological opportunities. Environmental threat refers to the challenge formed by a negative development trend in

the environment. If no decisive strategic behavior is taken, this unfortunate trend will weaken the target's competitive position. Environmental opportunities refer to areas where behavior is attractive, in which the project will have a competitive advantage. Under normal circumstances, in the process of adaptability analysis of the SWOT model, the senior management of the enterprise should adopt the four basic concepts of leverage, inhibition, vulnerability and problem based on determining the four internal and external variables.

The leverage effect (advantage + opportunity) arises when internal benefits and external opportunities are consistent and adapted. In this situation, companies and organizations can use their own internal advantages to pry up external opportunities, so that opportunities and advantages can be fully combined. However, opportunities are often fleeting. Enterprises and organizations must keenly capture opportunities and seize opportunities to seek greater development. Inhibition (opportunities + disadvantages) means hindering managers' control over the organization. When the opportunities provided by the environment are not compatible with the company's internal resource advantages or cannot overlap with each other, no matter how great the company's benefits are, they will not be able to be used. In this case, companies need to provide and add some resources to promote the transformation of internal resource disadvantages to advantages to cater to or adapt to external opportunities. Vulnerability (advantage + threat) refers to a reduction in the degree or strength of an advantage. When the external environmental conditions threaten the company's internal management and resources, the advantages are not fully utilized, thus becoming a fragile situation. In this situation, companies must overcome threats to take advantage. The problem (inferiority + threat) is that when the company's internal disadvantages meet the company's external threats, companies and organizations face severe challenges. If they are not handled properly, they may directly threaten the survival of the company. To better analyze the current situation of China's digital currency, the author will use SWOT analysis to understand and discuss.

The first entry point of the SWOT model is the internal condition of the organization. In order to facilitate managers to make decisions, people divide the internal status quo of the organization into Strengths and Weaknesses. The internal environment of the organization includes different aspects. What needs special marks in the model are the factors that can directly affect the core nature and development.

The other main body of the SWOT model is the external environment in which the organization is located. When discussing the organization's external environment, the main factors need to be divided into Opportunities and Threats. This advantage is to help decision-makers within the organization match their internal resources with the external environment to make the right decision.

3. Results & Discussion

3.1 S (strengths)

First, China's economy is shifting from a rapid growth stage to a high-quality development location. Technological innovation represented by the digital economy has become an essential driving force for the development of momentum. With the rapid development of digital technologies such as big data, cloud computing, artificial intelligence, blockchain, and the Internet of Things, new models and new business forms of the digital economy emerge endlessly.

Second, China's internal market is large enough to support the development requirements of digital currencies. As of June 30, 2021, the number of digital RMB pilot scenarios has exceeded 1.32 million, covering areas such as life payment, catering services, transportation, shopping and consumption, and government services. More than 20.87 million personal wallets and 3.51 million public wallets were opened, and the total number of transactions was 70.75 million with approximately 34.5 billion yuan. With the active participation and support of the participating local governments, digital renminbi red envelope activities have been carried out in some regions, realizing pilot testing of actual users in different scenarios and large-scale centralized testing in batches. The above conditions have verified the technical design and system stability of digital renminbi business, product ease of use, and

applicability of scenarios, and enhanced the public's understanding of the concept of digital renminbi design.

During the pilot period, the digital renminbi focused on a continuous exploration of application model innovation. Use smart contract technology to give digital CNY programmable features, improve expansion capabilities, and promote in-depth integration with application scenarios. Cooperate with relevant mobile phone manufacturers to research and provide new mobile payment experiences, including dual offline transactions. Based on the intelligent graphic card test, the hard wallet payment model separated from the mobile phone can bridge the "digital divide".

Third, China's electronic payment, especially mobile payment, has developed rapidly, providing the public with convenient and efficient retail payment services in recent years. While helping the development of the digital economy, it has also cultivated the public's digital payment habits and improved the public's understanding of technology and services—the need for innovation. At the same time, to achieve high-quality economic and social development, a new type of retail payment infrastructure that is safer, more versatile, and inclusive is objectively needed as a public product further to meet the diverse payment needs of the people and to improve the level of essential financial services. And efficiency, promote the smooth flow of the domestic cycle and provide strong support for constructing a new development pattern.

Fourth, with the development of the digital economy, China's cash utilization rate has recently shown a downward trend. According to statistics from the end of 2016 to the end of 2020, the balance of cash in circulation (M0) in China was 6.83 trillion yuan, 7.06 trillion yuan, 7.32 trillion yuan, 7.72 trillion yuan, and 8.43 trillion yuan, respectively, which still maintained an inevitable growth. Especially in places where financial service coverage is insufficient, the public's reliance on cash is still high. At the same time, the cost of cash management is relatively high, and its design, printing, transportation, identification, security, destruction, and anti-counterfeiting consume a lot of resources.

3.2 W (weaknesses)

First, the security risk of digital currency is different from traditional banking. Digital currency will be widely used in personal business or payment. Therefore, the protection of the system and the security of personal information are generally questioned and worried.

Second, the systemic risks of digital currencies. Considering that the practicality of digital currency is far greater than that of traditional banking business if the digital currency can be used for personal deposits and interest is required to be paid, bank cash will be converted into digital currency in a short time, which will cause adequate circulation of cash and tend to other risks.

3.3 O (opportunities)

First, encryption/digital currencies, especially global stable currencies, are developing rapidly. There are currently more than 10,000 influential cryptocurrencies, with a total market value of over \$1.3 trillion. Bitcoin and other cryptocurrencies use blockchain and encryption technology, claiming "decentralization" and "complete anonymity." Still, the lack of value support, sharp price fluctuations, low transaction efficiency, and tremendous energy consumption makes it difficult to use in daily economic activities.

Second, the current significant economies are actively considering or promoting central bank digital currency research and development. The latest survey report of the Bank for International Settlements shows that about 86% of central banks in 65 countries or economies have carried out digital currency research, and the number of national central banks undergoing experiments or proofs-of-concept has increased from 42% in 2019 to 60% in 2020. According to relevant public information, the central banks of the United States, the United Kingdom, France, Canada, Sweden, Japan, Russia, South Korea, and Singapore, as well as the European Central Bank, have announced their considerations and plans regarding central bank digital currencies in various forms in recent years.

Third, since the outbreak of the new crown pneumonia epidemic, digital work and life patterns such as online shopping, online office, and online education have become more active, and the coverage of

the digital economy has continued to expand. The demand for online financial services among people in underdeveloped and remote areas is growing.

Fourth, China will actively create opportunities for the stable development of digital currencies. In the Beijing Winter Olympics Organizing Committee Park, based on the construction of technological and imaginative Winter Olympics, pilot deployment of innovative application scenarios such as unmanned vans, self-service vending machines, and unmanned supermarkets, and launched payment gloves, payment badges, and winter Olympic payment clothing And other wearable devices. Pilot users generally believe that the digital renminbi will help further improve payment efficiency and reduce payment costs. The public, small and micro businesses, and enterprises can genuinely feel the characteristics of convenience and inclusive finance.

3.4 T (threats)

First, the speculative nature of digital currency will have potential risks that threaten financial security and social stability and become a payment tool for illegal economic activities such as money laundering. In response to the large volatility of cryptocurrency prices, some commercial organizations have launched so-called "stable currencies" in an attempt to maintain currency stability by pegging with sovereign currencies or related assets.

Second, international recognition. In the development process, the digital currency will partially replace the functions of banking and paper money. In dealing with the problems of cross-border trade and international payment, the function of digital currency will still be widely challenged. In addition, considering that more and more countries are developing a digital currency, the processes and advantages of China's digital currency will become the core competitive point in the field of digital currency.

Third, the private digital currency market. In private digital currency, the money supply will be more of an endogenous variable determined by the demand for money. It is not easy for a digital currency like Libra to replace the existing major international credit currencies on a large scale in a short period of time. There is still widespread controversy. But even so, the release of the Libra white paper is still of great significance. According to the Libra white paper, to maintain its stability, it is linked to several major international currencies around the world. If Libra can be issued in the future, it will not necessarily operate following the design of the white paper. If Libra is fully or more linked to a single currency, it will further strengthen the position of the single currency in the center of the world and lead to the rise of unilateralism.

At present, Libra, a digital currency, has 2.7 billion potential users. If it is successfully issued, it will have a substantial impact on the global currency system. Based on this, we must face up to the great significance of the release of the Libra white paper. The development of private digital currency is unstoppable, but private digital currency can't be one of the world's largest and in a state of monopoly. There is bound to be competition and cooperation in trade with countries. China has a sound Internet financial market and financial technology foundation. It should seize the current opportunities and actively participate in private digital currencies' research and development and market competition.

4. Conclusion

With the rapid development of economic level and industrial digitization today, the development field of digital currency has become an arena for competition among major economies in the world. As a representative of China's digital currency, the digital renminbi (CBDC) therefore represents China's long-term development carrier. According to the discussion in this article, China's digital currency has ushered in a significant development opportunity. This is because China has achieved a certain amount of trade in the digital currency field, reaching 34.5 billion yuan. At the same time, taking into account the existence of COVID-19, digital currency will protect people from face-to-face communication and avoid the possibility of paper currency spreading the virus. However, the inherent financial nature and security of digital currencies are also testing the carrying capacity of the Chinese government and banks. In addition, challenges from other countries and private individuals in the

world have always existed. Therefore, how China's digital currency uses opportunities to avoid risks and threats will become more critical. The author believes that a feasible policy to promote digital currency will include the following three aspects.

First, the Chinese government needs to speed up the construction of information infrastructure to stimulate market vitality. The basis of the operation of digital currency is the Internet and mobile devices. China still has large regional and urban-rural gaps, high construction costs, and technical instability. Concerning the infrastructure necessary for the development of financial technology such as the Internet and mobile devices, taking the opportunity of the country to promote "new infrastructure", through preferential policies such as tax reductions and exemptions, speed up the promotion of information infrastructure such as the Internet and communications in key and weak areas construction. Remove physical barriers and space constraints in the development of finance and digital technology. At the same time, based on strengthening risk control, appropriately relaxing the entry barriers or policy systems of related industries such as finance, monetary policy, and technological innovation.

Second, the advanced and mature technology that can bring convenience to digital currency is applied to traditional banking services and financial products to enhance customer experience and comfort. On the other hand, optimizing financial market information through financial technology will improve the efficiency of banks and financial markets. In addition, actively undertake capital investment and technology transfer from developed countries, learn from each other's strengths, and breakthrough digital currencies' technical bottleneck risk restrictions.

Third, China needs to increase investment in the research and development of digital currency core technologies and improve the design of digital currency supervision. The product and competition of global digital currency is essentially a competition of science and technology. China should seize the opportunity to further upgrade the core technology of digital currency and strengthen the technological upgrading of digital currency in terms of data security, transaction security, and risk control.

Taking blockchain technology as an example, the speed and magnitude of digital currencies in transactions are further improved by solving blockchain expansion and compatibility issues. At the same time, actively introduce overseas information technology talents and effectively absorb international advanced technology and experience. China needs to complete and improve the top-level design of digital currency supervision as soon as possible, formulate specific regulatory mechanisms, implementation measures, and risk prevention, build a digital currency regulatory framework, accelerate the improvement of relevant laws and regulations, ensure that there are laws to follow, and effectively avoid risk probabilities.

Acknowledgements

Yundi Zhang (Peking, 02/08/1997), master's degree (get the degree at 2021), Boston University (Unite State, Massachusetts, Boston), the major field study is Financial Management.

He got the 1st scholarship, 2017-2018.

He got the 2nd scholarship, 2018-2019.

References

- [1] HM. Gao & G. Li, "Fintech, digital currency and the restructuring of the global financial system", *Academic Forum*. Vol 2, pp. 102-108, July 2020.
- [2] UNCTAD, "Digital Economy Report 2021" presented at the Palais des Nations, 8-14, Av. de la Paix, Geneva 10, Switzerland, August 2021.
- [3] Yh. Chen, Jianzhong. Yu, & Zhen. Li. "China's central bank digital currency: system framework, influence mechanism and governance path", *Zhejiang Social Sciences*. Vol 10, pp. 145-156, October 2020.

- [4] F. Rothaermel, *Strategic Management*. McGraw-Hill Education, 4th ed, 2019 Ch 1. ISBN 13: 9781259927621.
- [5] T. Veblen & M. Banta, *The Theory of the Leisure Class*. Oxford University Press, USA, 1st ed, 2007. ISBN 13: 9780192806840.
- [6] Y. Shen, “Application of SWOT Analysis in the Positioning of Regional Sustainable Development,” Ph.D. dissertation, Dept. Eco. Chi., Xiamen Univ., Xiamen, Fujian, 2009.
- [7] M. Porter, *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press, USA, 1st ed, 1998, ISBN 13: 9780684841465.
- [8] Working Group on E-CNY Research Development of the People’s Bank of China. “Progress of Research & Development of E-CNY in China.” presented at the *China’s government report* on July 16th, 2021.
- [9] China Internet Network Information Center. “The 48th ‘Statistical Report on the Development of China’s Internet’”, presented at the *CNNIC report*. September 15th, 2021. From http://www.cnnic.cn/hlwfzyj/hlwzxbg/hlwtjbg/202109/t20210915_71543.htm.
- [10] China Academy of Information and Communications Technology. “China’s Digital Economy Development”, presented at the *Ministry of Industry and Information Technology*. April 2021. From http://www.caict.ac.cn/kxyj/qwfb/bps/202104/t20210423_374626.htm.