

# ***The Financial Implications of the Emergence of Digital Currencies under the Development of the Digital Economy***

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**Abstract:** Discuss whether the gradual popularization of digital currencies will have any impact on Internet finance. When digital currencies slowly enter our lives, the way we trade will gradually change, which will have a subtle impact on us. This paper through the literature induction method, found that not only digital currency will affect the development of Internet finance, but also affect the development of traditional commercial banks, through the study of the structure of Internet finance and the theory of digital currency, this paper can be inferred The emergence of digital currencies and how their gradual popularization will affect Internet finance, and through observation and summary, digital currencies have gradually penetrated into people's trading methods, and the issuance of digital currencies will bring many positive impacts to Internet finance. For example, the settlement method of digital currency will reduce the transaction costs of Internet finance, and the issuance of digital currency may lead to the rise of interest rates, making people more inclined to become investors, enter the Internet financial market for investment and purchase derivatives, thereby promoting currency circulation and promoting international economic development. Therefore, the issuance of digital currency is conducive to the development of a country's Internet finance, which can bring many benefits to Internet finance, so that the economy can be further developed and technology can progress.

**Keywords:** digital currency, internet finance, digital economy

## **1. Introduction**

Digital currency gradually appeared in people's eyes, with the continuous popularization of digital currency, in the face of the traditional monetary theory after a hundred years of economic situation, traditional monetary theory is the basis of modern economic theory, and the sudden emergence of digital currency will inevitably conflict with this monetary theory, The current economic situation has also slowly shifted from the traditional financial model to the digital economy for a major change, and the digital currency should be compatible with the banknotes currently issued in what way, which is also the sublimation of the traditional monetary theory. With the advent of the era of the digital economy, in the face of emerging Internet finance, the arrival of digital currency and the popularity of digital currency can bring Internet finance to a higher level. This article wants to explore the impact of the popularization of digital currencies on the new financial model in the future based on traditional monetary theory. Now digital currency is just a new form of money that has just entered people's eyes, as well as a more convenient way to pay. In the future, when the digital currency theory is

gradually formed, it will break the traditional mainstream payment method is also when Internet finance gradually covers the global economy, will the impact of digital currency be greater than traditional money, but when digital currency becomes mainstream, what will be the status of Internet finance? And when each country uses digital currency for transactions, each transaction is specific, open and transparent, and its source and whereabouts are identifiable Yes, it is a good trend for both the state and the citizens, it can prevent more fraud, and has authoritative traceable channels, the emergence of digital currency is also a transaction, and this new form of transaction. With the addition of new means and the gradual coverage of Internet finance, many commercial banks use credit cards, savings cards and other self-owned business transactions to earn fees, and the emergence of digital currencies will affect the payment methods of these types of transactions. This essay uses literature induction method to illustrate the conclusions of this paper from the perspectives of the development of digital currency and the impact of digital currency on commercial banks. If we can deal with the contradiction between digital currency and traditional finance, in the future, the global economic development will certainly be able to go further.

## **2. Internet Finance has Brought about a New Economic Situation**

Internet finance is a hot financial issue in recent times. It is a genealogical concept that includes both traditional finance and new forms of finance. Internet finance is more directly oriented to small investors and financial consumers, and the market is more transparent and open, giving financial investors and enterprises in need of capital greater ambition and hope. Internet finance relies on traditional financial currency theory to define itself as a financial market. First of all, it has a new set of currency transaction methods - digital currency (virtual currency), which can reduce the cost of money in transactions, and has the theoretical transaction value of traditional money that can be exchanged and become a general equivalent; Second, the traditional financial industry theories such as the diamond-Daibin foundation theoretical model of the bank, the Markowitz portfolio theory in the capital market, the Black-Scholes equity pricing formula, etc [1]. The research on market efficiency and the large number theorem of basic insurance theory has been incorporated into Internet finance, which has led to the solid development of Internet finance. Third, compared with the real financial market, the Internet financial market exposed to big data has more transparent data support and a strict and standardized management system, and transaction costs and information asymmetry can be greatly reduced. Cloud computing has a greater advantage than human brain computing. In addition to having more data, it can also make precise, careful, error-free calculations. It has greatly improved the efficiency of risk pricing and risk management, expanded the boundaries of transaction possibilities, realized direct transactions between supply and demand of funds, and changed the transaction and organizational form of traditional finance. Fourth, as an online transaction, the content of the transaction can be checked in real time with almost no delay. With the excellent information processing ability and group advantages of the Internet, all transaction information between people can be analyzed through data analysis, which can expand the frontier of production possibilities of financial services, analyze and classify people's consumption capacity and investment ability, and is a group that could not obtain traditional financial support before, and obtained certain financial support with the help of the Internet.

## **3. Compatibility of Digital Currencies with Traditional Monetary Theory**

Money is a universally accepted medium of exchange. It has its own features such as units of measurement and store of value. Money has gone from being the general equivalent of paper money that the government provides for full-time printing and issuance, from commodities to mediums that can be exchanged for goods. Now, the emergence of digital currencies has opened a new chapter for

the future economic situation. The emergence of virtual digital currencies has brought a new round of economic shocks. From the early recognition of bitcoin by the United States to the current digitized personal name coin of the Chinese government, although there are many different degrees of recognition, their emergence has undoubtedly made the Internet economy more and more effective, and further promoted the development of Internet finance. First of all, money has the function of creation, under the credit monetary system, the liabilities of commercial banks are an important part of a country's currency. People can operate directly from the internet and use digital currencies for deposits and loans, which has changed people's habits of obtaining deposits and loans and the efficiency of payment systems, but the customs brokerage business of banks still exists, only cash has become digital currency, and warehouses have become databases. Banks and people can also reduce transaction times and banknote costs, thereby reducing transaction costs. Secondly, virtual currencies and digital currencies are also different. For example, Bitcoin is different from a digital currency issued by the Central Bank of China. One of them is the digital version of the state-issued banknote, recognized by the central government, which functions the same as the renminbi, while Bitcoin is a virtual commodity. It is only because of its rarity that the creation of a new currency that can resist inflation and facilitate people's payment is getting higher and higher on the Internet, and the decentralized digital currency represented by Bitcoin has risen rapidly, making it have a certain ability to exchange goods, and thus have a certain amount. "self-value", but its decentralized design causes its own price to lose stability. The central bank's digital currency is a personal name currency that has the monetary function of traditional money and simply digitizes the physical currency. It has a traditional monetary function, and digital currency is more efficient and easier to supervise, narrowing the distance between citizens and the central bank, reducing the deposit demand of commercial banks, reducing the deposit reserves of commercial banks in the central bank, which can promote economic development. Finally, in the case of Marx's theory of money, money is the complete form of value development, a qualitative recognition and quantitative calculation that directly represents social labor and can be measured with commodities produced by private labor, rather than a symbol of credit, as is the case with digital currency today. Marx believed that commodities, money, coinage to modern paper money and even digital money like today are, in the final analysis, only the deepening of the degree of value symbolization, that is, the actual value contained in money and the nominal value it represents, so the value of money itself will only be symbolized in part of its functions in future development [2]. The idea of digital currency, in a broad sense, merges the traditional features of money with the convenience of electronic transactions, the bank debit card being a leading example. But the public acceptance of electronic banking transactions has made possible the emergence of an alternative form of digital money, not tethered to a bank account or other traditional store of value, whose trustworthiness lies in the computer algorithms that underlie its construction and distribution. On its face, the virtual currency would appear to be uniquely unqualified as a store of value since virtual currency is just that. But "virtual" does not just mean synthesized or projected: the algorithm that generates units of a particular virtual currency like Bitcoin can guarantee that the currency remains within some pre-specified range of supply [3].

#### **4. The Transformation of the Existing Financial Model of Commercial Banks in the Context of Digital Currency**

Digital currencies are in the trial stage, and some loopholes will appear in supervision. There may be two forms of issuance of digital currencies in the future: one issued directly by the central bank and the other issued in a binary mode through the central bank - commercial bank. Digital currencies guarantee the security and integrity of financial data with a centralized monetary system and distributed ledgers. First, in the context of digital currency, money does not appear in physical form, but in encrypted digital code, which greatly saves the physical storage space of commercial banks,

but also saves the cost of currency transportation, neither the loss of money in transportation, but also can be transferred more quickly, which greatly reduces the bank's manpower and material capital, and greatly improves the efficiency of the bank [4]. And because citizens can handle most of the banking business through the Internet, most of the online self-operated businesses can be handled efficiently without delay. Second, because digital currency is exchanged from the public with its own bank deposits or cash, it will make the bank's excess deposit reserve limit the ability of the bank to create credit money, affecting the credit business of commercial banks to introduce deposit and loan spreads

If the digital currency is issued by a commercial bank, since the digital RMB is positioned in the M0 substitution, it is consistent with the physical RMB that also belongs to the M0 category, and the interest is not calculated according to the liabilities-deposits of the commercial bank [5]. The market is not perfectly competitive among commercial banks, different banks adjust their own digital currency interest rates in order to attract deposits from the public's home banks, and the increased monetary interest rate can only be compensated by increasing the loan interest rate, which will lead to an increase in financing costs, resulting in a decrease in the number of loans. If the interest rate of digital currency is appropriately raised, the deposit interest rate can be appropriately raised to the public, which can increase its own bank deposits at the same time, reduce the profit of bank unit deposits, increase bank liquidity, and release more loans. This will lead to more bank financing, which in turn will lead to more loan supply and lower lending rates. Therefore, such as adjusting the interest rate of digital currency, this important indicator should be carefully decided by every commercial bank. Third, if digital currencies are used on a large scale, the original paper money operation mechanism may have new fluctuations, new settlement methods, and new accounting methods may cause economic fluctuations, but legal digital currencies as supplementary currencies, due to their digitization, the demand for physical currencies has declined, and the speed of financial transformation has accelerated. Therefore, commercial banks need to use digital currency, innovate new payment scenarios, actively develop digital currency in line with the times, expand the business boundaries of digital currency business and intermediate business, accelerate the financial infrastructure construction of software and hardware, use digital currency projects to systematically update and iterate, meet the new needs of customers for new models of commercial banks, and improve their service quality [6]. Attract more market partners, let customers develop the habit of using banking financial services on a daily basis, create more diversified consumption scenarios, promote the upgrading of digital transformation of commercial banks, and regain opportunities in competition with third-party payment institutions. At last, internet finance has the strongest risk spillover effect on the banking sector. Internet finance has the highest risk of banking contagion in the event of extreme risk. The theoretical analysis of risk spillover examines the direct and indirect risk spillover from internet finance to the banking industry. Internet finance has many paths for spreading risk to the banking industry. For example, the risks caused by third-party payments and P2P network lending, as an important part of Internet finance, will be transferred to banks which gradually are developing online business. Numerous relationships also directly lead to these risks and spread to the banking industry. Furthermore, the development of internet banking-related businesses in the banking industry increase the risk spillover from internet banking to the banking industry [7].

## **5. The Emergence of a "Legal" Digital Currency Needs to Be Better Regulated and Regulated by the State**

The impact of digital currency on Internet finance is slowly penetrating, when Internet finance occupies the global economic market. At that time, digital currencies gradually have their own role. It may become the master of trading methods in the future. As a trading platform, the intermediary function of commercial banks is gradually reduced, and digital currencies become their trading tools,

which can reduce the loss of fees in the transaction process of commercial banks, thereby reducing costs. It has changed from online to online and offline trading. Not only can transactions be made when there is a network, but currency trading can also be carried out normally when there is no network and signals. It's the same as using banknotes offline, but it's just the circulation of data. No need to manually exchange currency and goods. This form of transaction accelerated the flow of goods and money and promoted economic development. In addition, the central government can work with major enterprises to optimize the operational technology of digital currencies. Blockchain technology is the prototype of cloud computing "private cloud + high-performance database + mobile terminal", which is associated with "private cloud + blockchain + mobile terminal", making the central database more powerful, making user data more secure, making the terminal more intelligent, and making A personal mobile phone like a mobile wallet with banknotes [8][9]. Put your own digital currency into your phone and you can use it anytime, anywhere. With the continuous upgrading of technology, it can also promote the progress of Internet finance and promote economic development. However, in addition to these positive effects, digital currencies will also bring some negative effects to Internet finance. Due to the particularity of digital currency, I believe that in the future, the central bank will definitely put some rights and interests in major banks, so that they have the right to issue digital currency belonging to their own banks, rather than holding all digital currencies in the hands of the central bank itself. In this way, for a long time, the rapid return of money will inevitably lead to the continuous rise of monetary deposits, making major commercial banks lack liquidity, and if the banks do not adjust in time, they will trigger a series of economic losses.

Therefore, the central bank will give a part of the right to issue money to a trusted and capable bank agent, and when the state gives the bank agent the power to issue money, the state's supervision needs to be strengthened, otherwise, a solution is not careful It will lead to the collapse of a country's economy, but only after this change can the traditional economy be better integrated with the emerging Internet finance. Moreover, when commercial banks lose the trading rights of intermediaries and have the right to issue currency, the intermediary functions and lending functions of Internet finance will also be shared by the digital currency issued by banks. Therefore, the procedural problem of how to balance digital currencies is also difficult to solve. Secondly, due to the particularity of digital currency, the future national law must gradually intervene, because money is the basis of the economy, without money, the exchange of commodities has become a big problem, and the issuance trend of the future national economic law is very important, which is closely related to the future trend of digital currency and the development of Internet finance. If major banks do have access to agency issuance, credit issues will surely surface over time. Issued in the context of national reputation, what should a bank-managed digital currency do if a bank suddenly goes bankrupt due to operational risks or other systemic risks? Does it lead to a country's credit risk? Finally, the issuance of digital currency will certainly be the same as the issuance of ordinary money, when time passes, a series of inflation will occur, but the digital economy has the general nature of general purpose technology, penetration, synergy, and interactivity, which have a promoting effect on the development of various industries and have the potential to improve labor productivity. In general, general-purpose technologies can improve productivity, reduce supply costs, and generally have anti-inflationary nature, while the issuance of digital currencies has made the digital economy rise faster, so that intangible capital can get rid of dependence on tangible capital. Before the emergence of the digital economy, intangible capital needed to rely more on tangible capital to exist, when the development of the digital economy freed the media from dependence on tangible capital, and the rise of intangible capital will also challenge the existing financial system, thereby reducing interest rates and rising prices. This will have a profound impact on long-term inflation trends [10]. Therefore, in a country with a strong political background, there is almost no inflation and unfair distribution of

wealth caused by over-issued currency, and the number of digital currencies issued based on gold and silver stocks and physical currencies will not cause these problems.

## 6. Result

On the whole, the starting point of digital currency is beneficial to Internet finance. Its convenience and security cannot be compared with any payment method. For Internet finance, which is famous for its speed, it pays more attention to the speed of payment. Therefore, digital currency is very suitable for the concept of Internet finance. Secondly, it is its security, but there are two types of digital currency here. The first is the virtual cryptocurrency developed by individuals, which cannot be called digital currency. Even if it's just a "commodity" that has no value, it is brought on fire for some reason, causing many people to own it so that he has the transaction value of the currency, and use it to trade, it is untraceable and unsafe trading tools. The second is what the author refers to as a serious digital currency guaranteed by national background and national reputation, which is safe and reliable. In the initial stage of Internet finance, digital currency brings not only portability and security to Internet finance, but also the liquidity and storability of digital currency. Because it is a currency issued by the state, its liquidity is self-evident. The banknotes in the mobile phone are not limited to buyers and sellers, and can buy goods everywhere. The storability of digital currency may affect the development of the Internet economy. Now the currency is in the hands of the central bank and circulated in major banks and There will be a decrease in the currency in derivatives, which will lead to an imbalance in the economy. In the future, if digital currency is rampant, if national laws are conducive to the issuance of the digital economy, in most cases, it can bring positive effects to Internet finance.

## 7. Discussion

The popularity of digital currency bears the brunt of the positive effects brought to Internet finance, because the convenience, security, traceability and liquidity of digital currency can bring a lot of convenience and security to Internet finance, and The intermediary dilutes the nature of Internet finance allows digital currency to reduce its transaction costs, which is very beneficial to the operation of Internet finance. However, due to the limitations of digital currency issuance, this type of currency has greater regulatory risks [11][12]. The country must introduce effective, mandatory and legalized policies and laws to make digital currency popular more convenient and safer. Moreover, the traceability of the transaction is a more distressing issue for digital currency. If someone has power and power, is it possible to shield themselves or if someone uses this transaction information to obtain illegal benefits and how, whether this transparent transaction will go to the public. Approved. Therefore, the author believes that, first, in the future, the country's control of digital currency, what mandatory policies and laws are introduced is very important; second, when the country has too much digital currency storage, it should be open to Internet finance. The looser monetary policy enables the digital currency stored in the central bank to have relatively good circulation and is no longer accumulated in the hand; third, as a digital currency, its liquidity should not stop at domestic people. Whether it can become a gold-linked currency through the World Monetary Organization is managed by countries.

## 8. Conclusion

This research aimed to study the emergence of digital currencies in the digital economy that will have an impact on the global Internet economy while also partially conflicting with the traditional banking industry. The introduction of digital currencies is beneficial for people to enter a new era of transactions and enter an era of more convenient and secure transactions. All in all, in the era of the



development of the digital economy, the issuance of digital currency is a recognition of the country's reputation and the strength of the national background, a trading tool that is conducive to the development of Internet finance, and it can be a better development trend for Internet finance. In order to accelerate the integration of digital currency into the economy and provide greater convenience for Internet finance, it has laid a certain foundation for research, and provide guidance for new digital currency theories.

## References

- [1] Xie Ping, Zou Chuanwei, 2012, *《Research on Internet Financial Models》*, *Financial Research Issue 12*.
- [2] Sang Chaoyang, 2022, *《The Connotation Definition and Essential Analysis of Digital Currency: Based on Marx's Monetary Theory》*, *Credit Investigation Issue 5*, pp. 56-62.
- [3] Hio Loi, 2016, *《ESSAYS ON DIGITAL CURRENCY》*.
- [4] Li Xinge, 2022, *《The Dilemma and Transformation of Commercial Banks in the Context of Fiat Digital Currency》*, *China Collective Economy Issue 13*, pp. 107-109.
- [5] Cao Lei, 2022, *《Discussion on the Business of Financial Institutions in the Context of Fiat Digital Currency》*, *FinTech Era Issue 5*, pp. 41-45.
- [6] Gong Xiaolin, 2013, *《Internet Financial Model and Its Influence on Traditional Banking Industry》*, *Southern Finance Issue 5*.
- [7] Rongda Chen, Huiwen Chen, Chenglu Jin, Bo Wei, Lean Yu, 2020, *《Emerging Markets Finance and Trade》*, 56:1196–1210.
- [8] Yao Qian, Tang Yingwei, 2017, *《Some Thoughts on the Legal Digital Currency of the Central Bank》*, *Financial Research Issue 7*, pp. 78-85.
- [9] Xu Wanchun, Zhang Meipin, 2020, *《The Research on the Scale of China's Digital Economy Based on the Perspective of International Comparison》*, *China Industrial Economy Issue 5*, pp. 23-41.
- [10] Li Jun liang, 2022, *《Analysis of the Impact of Digital Economy Development on Long-term Inflation Trends》*, *China Prices Issue 5*, pp. 7-10.
- [11] Xie Ping, Zou Chuanwei, Liu Haier, 2015, *《Basic Theory of Internet Finance》*, *Financial Research Issue No. 8*, pp. 1-12.
- [12] Jiao Jinpu, Sun Yaoqi, Huang Xiangxiang, Wang Yaodu, 2015, *《Theoretical Framework, International Practice and Supervision System for the Development of Digital Currency and Inclusive Finance》*, *Financial Supervision Research Issue 7*, pp. 19-35.