

# Research on Cross-border Cooperation of Insurance in Guangdong-Hong Kong-Macao Greater Bay Area Based on Digital Currency

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## ABSTRACT

Foreign exchange management in cross-border capital management is a ponderous and systematic process, especially the boom of buying insurance business from inland to Hong Kong-Macao is soaring year by year, which brings a lot of challenges for both regulation and practice. The future development of deep cooperation between Shenzhen and Hong Kong, Macao and Hengqin in the Guangdong-Hong Kong Bay Area will be an opportunity, so this study elaborates on the development history of digital currency and China's attempts in the field of digital currency and the development vision of digital currency for promoting insurance in Guangdong, Hong Kong and Macao, etc. It has certain practical and theoretical significance to promote deep cooperation from the perspective of digital currency research and analysis.

**Keywords:** Digital Currency; Guangdong-Hong Kong-Macao Greater Bay Area; Insurance Cross-border

## 1. INTRODUCTION

The application of digital RMB in various financial scenarios has attracted the attention of all walks of life since the news of the central bank's digital RMB pilot program "flooded the screen". Nevertheless, the use of the digital RMB is limited on account of focusing on a narrow range of retail, transportation card recharge and catering. However, as a "balancer" for social risk control, the combination of the insurance industry and the digital RMB is still in its infancy, but it is also eye-catching enough. What kind of wonderful chemical reaction will be generated by the combination of digital RMB and insurance?

## 2. LITERATURE REVIEW

### 2.1 Digital currency

The definition of digital currency has not yet formed a unified concept in the theoretical and practical circles, and the majorities are prone to divide digital currency into broad and narrow concepts according to the mainstream views of existing scholars. Laven (2013) thought that digital currency in a broad sense emphasizes

on its electronic characteristics, mainly including the previous digital gold currency and various modern virtual currencies, such as Bitcoin, online virtual coins, etc. Koning (2017) classifies digital currencies into "Central Bank Digital Accounts (CBDA)" and "Central Bank Digital Currency (CBDC)" based on whether they rely on central bank accounts; Bech, and Garratt (2017) proposed the concept of cryptocurrency<sup>[1]</sup>. Xie Ping and Shi Wuguang<sup>[2]</sup> put forward that digital cryptocurrency is a currency based on cryptography and network P2P technology, generated by a computer program, and issued and circulated on the Internet. Yao Qian<sup>[3]</sup> conceived the concept of digital currency from the two-layer structure of account and wallet. Song Haoran<sup>[4]</sup> considered digital currency as a cryptography token with monetary functions on the basis of cryptography theory. Bian Zhicun<sup>[5]</sup> believed that digital currency refers to the "legal electronic currency" issued by the central bank, which is parallel to cash.

With respect to the research on the issuance mode of digital currency, Athey S (2016)[1] pointed out that early digital currencies which were independent of the central bank monetary system, were developed by private or civil organization institutions, thus, he proposed that digital

currencies have the characteristics of decentralization, fast circulation and hard supervision; Yao Qian (2016), a domestic scholar, made certain suggestions on the design and construction of legal digital currency from the technical design aspect of digital currency; Wu Zhifeng<sup>[6]</sup> proposed three issue modes of legal digital currency: the first is the central bank large account model, in which the public opens an account directly at the central bank; the second is the cooperation between the central bank and commercial banks to jointly issue digital currency; the third is the previous monetary systems similar to the central bank, which is gradually formed by the natural evolution of digital currency.

In recent years, scholars' research on digital currencies has focused more on the risk and regulation of digital currencies. Qiao Haishu, Wang Peng, and Xie Shanshan<sup>[7]</sup> believed that the inherent characteristics of digital currencies affect the transmission and regulation of monetary policy, etc., so it is necessary to establish a method for monitoring and regulating digital currencies.

## ***2.2 The development of Guangdong-Hong Kong-Macao Greater Bay Area***

Wu Jiawei<sup>[8]</sup> was the first scholar to study the Bay Area economy with reference to the San Francisco Bay Area in the U.S. He proposed that the Bay Area economy should have several elements such as a super port, a developed financial and transportation hub in the region. From the overall trend, the research flush on the Guangdong-Hong Kong-Macao Greater Bay Area is rising, but there was little research literature on the Guangdong-Hong Kong-Macao Greater Bay Area by domestic scholars before 2016. Since the concept of "Guangdong-Hong Kong-Macao Greater Bay Area" was first put forward in the 13th Five-Year Plan of Guangdong Province in 2015, the research on the Guangdong-Hong Kong-Macao Greater Bay Area has increased significantly. Cai Chimeng<sup>[9]</sup> gave corresponding countermeasures against the upcoming challenges by analyzing the necessity of the development of the Guangdong-Hong Kong-Macao Greater Bay Area; Ma Zhongxin and Shen Yong<sup>[10]</sup> empirically analyzed that efficient institutional-cultural supply and the innate advantages of the Bay Area economy itself would form a superposition effect, and China should accelerate efficient institutional-cultural supply in the growth of the Greater Bay Area economy; Mao Yanhua, and Yang Siwei<sup>[11]</sup> raised the theoretical basis and institutional innovation for the construction of Guangdong-Hong Kong-Macao Greater Bay Area; Qin Chenglin<sup>[12]</sup> proposed that the growth of Guangdong-Hong Kong-Macao Greater Bay Area requires the concept of synergistic development.

There are relatively few literature studies about insurance participation in support of establishing Guangdong-Hong Kong-Macao Bay Area by dint of

literature search. Zou Fan and Gubo<sup>[13]</sup> first analyzed the cooperation possibility of agricultural insurance in Guangdong-Hong Kong-Macao and proposed to promote Guangdong-Hong Kong-Macao agricultural insurance by importing capital, introducing Guangdong-Hong Kong-Macao insurance companies and hiring Guangdong-Hong Kong-Macao insurance brokerage firms. Guo Wenwei and Wang Wenqi<sup>[14]</sup> concluded that the regional aggregation of the insurance industry in the economic development of the Guangdong-Hong Kong-Macao Bay Area has exerted a much more significant positive promotion effect on science and technology innovation than the regional focus of the banking and securities industries according to the financial data of 11 cities in the Guangdong-Hong Kong-Macao Bay Area from 2006 to 2016 through empirical analysis. Manqing Qin<sup>[12]</sup> propounded the social insurance portability in the Guangdong-Hong Kong-Macao Bay Area by comparing the pension insurance systems in Guangdong, Hong Kong and Macao and learning from the EU pension insurance portability.

## **3. THE GROWTH OF DIGITAL CURRENCY**

### ***3.1 History of digital currency***

In 2009, Bitcoin came out of nowhere, breaking the monopoly of central bank-issued currencies. Once Bitcoin was created, relying on blockchain technology, its characteristics of encryption, decentralization and anonymity (pseudonymity) made it very popular and its price skyrocketed. Subsequently, cryptocurrencies, based on blockchain and decentralized ideas (such as Litecoin and Ethereum), have emerged one after another and are used as payment mediums in different transaction scenarios and approaches. From the perspective of the characteristics of virtual digital currencies, the "mining" mechanism such as proof of workload endows the value attributes of virtual digital currencies such as Bitcoin, and the anonymity (pseudonymity) and hash immutability ensure their strong value of use. However, Bitcoin and other virtual currencies have neither national credit endorsement, nor are they backed by corresponding reserve value assets, whose market prices are too volatile and speculative. In recent years, various forms of ICO issuance and trading in the "cryptocurrency circle" market have seriously affected the normal order of the financial and currency markets worldwide.

Since 2015, the emergence of so-called "stable coins" represented by TEDA (USDT) has attempted to build a bridge between virtual currencies and legal currencies by establishing a stable exchange relationship with legal currencies such as the U.S. dollar (e.g., USDT to U.S. dollar exchange rate is 1:1), so as to open up the link between virtual digital currencies and the legal currency market. However, the centralized issuance without

national credit support and moral risks in management model are questioned by the market, receiving low practical effect.

In June 2019, Facebook-led Libra project for the white paper and test network were officially released. Libra is a cryptocurrency that does not seek exchange rate stability against the U.S. dollar, but rather relative stability in real purchasing power. It is initially collateralized by a basket of low-volatility assets denominated in four fiat currencies: USD, GBP, EUR and JPY. According to the white paper's vision and positioning of Libra, Libra focuses on digital payments and financial inclusion and aims to make currency payments and circulation at a lower cost and faster speed for users worldwide, especially for countries with poor financial infrastructure. Compared to digital currencies such as Bitcoin, Libra has a real asset reserve, no fixed total amount, preferring monetary payment function, whose price may be relatively stable with no significant appreciation ability.

### ***3.2 China's attempts in the field of digital currency***

China's Central Bank started to study (legal) digital currency in 2014 to proactively respond to the impact of virtual digital currency on the existing monetary and financial system. In 2015, the central bank conducted an in-depth study on the framework of issuance and business operation of digital RMB, key technologies of digital currency, issuance and circulation environment, legal issues, impact on the economic and financial institution, the relationship between legal digital currency and digital currency issued by private, and the international experience of issuing digital currency. In January 2016, the Central Bank, who held a seminar on digital currency to discuss the general framework of issuing digital currency, legal cryptocurrency and other issues, proposed to launch digital RMB at an early date. Since August 2019, the People's Bank of China has announced the preparation for the research and issuance of legal digital currency (digital RMB) through an authoritative approach. In 2020, the Construction Bank App launched the wallet function of digital currency in August, led by the central bank and tested by the banks internally on the implementing scenarios of digital currency and so on; the People's Bank of China handled RMB 1.1 billion worth of digital currency through pilot affairs in October, the Shenzhen Municipal People's Government, in conjunction with the People's Bank, launched a pilot activity about red packet of digital currency. At present, the digital RMB first conducts internal closed pilot tests in Shenzhen, Suzhou, Xiongan, Chengdu and upcoming Winter Olympics scenarios.

## **4. DIGITAL CURRENCY WILL PROMOTE THE DEVELOPMENT OF INSURANCE IN GUANGDONG, HONG KONG AND MACAO**

In February 2019, the Central Committee of the Communist Party of China and the State Council issued and implemented the "Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area". Under this opportunity, policies and plans such as "Opinions on Financial Support for the Construction of Guangdong-Hong Kong-Macao Greater Bay Area", "General Plan for Building Hengqin Guangdong-Macao In-depth Cooperation Zone", and "Plan for Comprehensive Deepening the Reform and Opening-up of the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone" were introduced one after another.

**Table 1** Financial policies table of Guangdong-Hong Kong-Macao Greater Bay Area

Serial NO.	Issue Dsate	Policies
1	February 18, 2019	Outline Development Plan for the Guangdong-Hong Kong - Macao Greater Bay Area
2	April 26, 2019	China's First Financial Regulatory Technology Laboratory Inaugurated in Guangzhou
3	May 14, 2020	Opinions on Financial Support for Building Guangdong-Hong Kong-Macao Greater Bay Area
4	November 11, 2020	Notice on Promoting Work Related to Life Insurance Products in the Guangdong-Hong Kong-Macao Greater Bay Area
5	September 5, 2021	General Plan for Building Hengqin Guangdong-Macao In-depth Cooperation Zone
6	September 6, 2021	Plan for Comprehensive Deepening the Reform and Opening-up of the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone

The “Outline Development Plan for Guangdong-Hong Kong and Macao Bay Area” proposed to “support the construction of a pilot zone for the insurance innovation and development in Shenzhen, promote the interconnection of the Shenzhen-Hong Kong financial markets and financial cooperation with Shenzhen-Macao characteristics, carry out technological finance pilots, and strengthen the construction of financial technology carriers.” In the plan, it is proposed to “promote the connectivity of financial markets in an orderly manner and gradually expand the scale and scope of cross-border use of RMB in the Greater Bay Area.”

On April 26, 2019, the first financial regulatory technology laboratory "School of Business of Sun Yat-sen University-Guangzhou Commodity Clearing Center Joint Laboratory of Financial Regulatory Technology" was unveiled at the Big Data Center of School of Business of Sun Yat-sen University. The laboratory will serve the development of the real economy as the fundamental purpose, using science and technology to break the bottleneck of financial development, reduce the barriers to financial services and enhance financial inclusion, which is a new attempt of industry-university-research.

On May 14, 2020, the People's Bank of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission, and State Administration of Foreign Exchange issued the “Opinions on Financial Support for Building the Guangdong-Hong Kong-Macao Greater Bay Area”(Yinfa [2020] No. 95), which mainly involve the insurance industry: "cross-border business in support of mainland non-bank financial institutions and Hong Kong-Macao area, cross-border financing, cross-border guarantee, cross-border asset transfer and other businesses in accordance with regulations in favor of financial leasing companies, auto finance companies, securities companies, fund management companies, futures companies, insurance companies and other institutions in the Guangdong-Hong Kong-Macao Greater Bay Area to use RMB for valuation and settlement ", and "improvement for the management and services of cross-border income and expenditure in insurance business. For the insurance business that complies with the regulations of the banking and insurance regulatory institutions and the current foreign exchange management policies, it will further facilitate the banks in the Guangdong-Hong Kong-Macao Greater Bay Area to provide cross-border capital exchange services such as claim settlement, renewal and surrender of insurance products for mainland residents who have purchased insurance products in Hong Kong and Macao. The return of RMB insurance funds from Hong Kong and Macao will be encouraged. Hong Kong-Macao insurance companies who obtain RMB Qualified Foreign Institutional Investor (RQFII) and Qualified Foreign Institutional Investor (QFII) in accordance with

the law will be supported to provide financing support for building the Guangdong-Hong Kong-Macao Greater Bay Area.” The Opinions also hope to facilitate cross-border investment and financing innovation, improve the efficiency of capital financing, and steadily promote the internationalization of the RMB.

On November 11, 2020, China Banking and Insurance Regulatory Commission issued the “Notice on Promoting Work Related to Life Insurance Products in the Guangdong-Hong Kong-Macao Greater Bay Area”(CBIRC Office Notice [2020] No. 1481), which standardizes the promotion of innovative cross-border medical insurance products and exclusive critical illness insurance products in the Guangdong-Hong Kong-Macao Greater Bay Area, mainly including clarifying the sales area, the area of cross-border medical insurance products and the determination of rates.

On September 5, 2021, the “General Plan for building Hengqin Guangdong-Macao In-depth Cooperation Zone” pointed out that “cross-border RMB settlement business will be supported in the cooperation zone, domestic and foreign investors to use RMB in cross-border venture capital investment and related investment and trade will be encouraged and propped up”. “Cross-border motor vehicle insurance, cross-border commercial medical insurance and letter of credit insurance will be supported in the cooperation zone”.

On September 6, 2021, the “Plan for Comprehensive Deepening the Reform and Opening-up of the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone” pointed out that “the implementation of the national policies and measures to expand the opening up of the financial sector in the Qianhai Cooperation Zone will be supported, and areas such as financial market interconnection with Hong Kong-Macao, cross-border use of RMB, and facilitation of foreign exchange management will be carried out and piloted. Bank account pilot will be carried out to integrate domestic and foreign currency to provide market players with high-quality, safe and efficient bank account services.”

## **5. ASSUMPTIONS OF DIGITAL CURRENCY TO PROMOTE THE DEVELOPMENT OF INSURANCE IN THE GUANGDONG-HONG KONG-MACAO GREATER BAY AREA**

Hong Kong-Macao insurance has three main selling points: low premiums, wide coverage and high returns, which are more attractive to mainland residents, especially those with high incomes. Insuring a Hong Kong-Macao insurance policy within the country is an illegal "underground policy", which is not protected by the laws of the Mainland, nor by the laws of Hong Kong-Macao. There are also risks of foreign exchange control

in purchasing insurance in Hong Kong-Macao. In view of this, the use of digital currency can help establish the system of cross-border insurance transaction and risk control.

Digital currency may be an effective means to solve the problem of cross-border purchase of insurance. Only legal digital currency endorsed by national credit is discussed here. In the most ideal state, the digital currency as a recognized legal tender circulates in the Guangdong-Hong Kong-Macao Greater Bay Area, similar to the circulation scenario of the euro within the European Union. It will not only benefit the insurance industry, but will have a significant impact on all areas of production and life, and the future application combined with big data will further improve the efficiency of transactions and risk control.

The insurance transaction model of digital currency in Guangdong-Hong Kong-Macao Greater Bay Area

At the initial stage of digital currency trial, it can be piloted in the insurance industry of Guangdong-Hong Kong-Macao Greater Bay Area. Taking the insurance transactions between the Mainland, Hong Kong-Macao as the scenario, it is envisaged to establish the Guangdong-Hong Kong-Macao Greater Bay Area Insurance Trading Platform. The Guangdong-Hong Kong-Macao Greater Bay Area insurance trading platform will connect banks, insurance institutions and insurance clients, providing technical guarantee for digital currency settlement and online insurance transaction services. The implementation of the client can be in the form of "Guangdong-Hong Kong-Macao Greater Bay Area Insurance Trading Platform" APP, or the relevant modules can be embedded into the APP of insurance companies and banks for the convenience of customers.

The financial technology company establishes and operates the Guangdong-Hong Kong-Macao Greater Bay Area Insurance Trading Platform. The bank, as the circulation and settlement party of digital currency, is responsible for the daily management of digital currency and foreign exchange settlement. According to the actual situation of the current digital RMB pilot in Shenzhen, one or more banks among the five major banks can be selected to participate in the Guangdong-Hong Kong-Macao-Greater Bay Area Insurance Trading Platform. In the future, provided that China Merchants Bank is allowed to carry out the digital RMB pilot, China Merchants Bank can be preferred (China Merchants Bank is a nationwide commercial bank based in Shenzhen, covering the whole country and orienting towards overseas, with Hong Kong-Macao branches and China Merchants Wing Lung Bank in Hong Kong-Macao, which owns the capability of hardware and software and region advantages for implementing digital currency settlement). Insurance institutions are insurance companies that can operate insurance in the Guangdong-

Hong Kong-Macao Greater Bay Area, including relevant personal and property insurance companies in the mainland, Hong Kong-Macao and Macao, mainly aiming for customers in Hong Kong-Macao, Macao and nine cities in the Pearl River Delta covered by the Guangdong-Hong Kong-Macao Greater Bay Area.

## 6. CONCLUSION

In short, the establishment of the Guangdong-Hong Kong-Macao Great Bay Area insurance trading model with digital currency as a medium can prevent risks in all aspects. Meanwhile, it is of great significance in the financial scene and the construction of the prospective integrated protection system in the Bay Area.

Digital currency will be as convenient and practical as local currency with the help of Guangdong-Hong Kong-Macao Great Bay Area insurance trading platform, whether for mainland customers or Hong Kong and Macao customers: mainland residents can purchase insurance products of Hong Kong-Macao-Macao by means of digital currency; Hong Kong-Macao and Macao residents can also purchase mainland insurance by digital currency, without the need to travel between the two places, substantially decreasing the exchange rate risk and also solving the problem of "underground insurance policy". Insurance companies can pay insurance benefits, dividends and claims to cross-border customers through digital currency, which will also effectively prevent illegal activities and capital outflow. The local currency owned by clients and insurance institutions will be automatically settled through the banking system in the background in line with certain settlement rules without additional exchange operation. The currency settlement rules can be fixed for a certain period of time premised on the settlement exchange rate, or allow minor fluctuation.

Since digital currencies through cross-border transactions requires assuming the functions of measure of value, means of circulation, means of payment and store of value, it is necessary for the monetary regulatory authorities of the Mainland, Hong Kong-Macao to reach a consensus on the rules of settlement and circulation of digital currencies, including the formulation of risk control measures to prevent illegal activities and capital outflow. In essence, digital currency trading of insurance industry in the Guangdong-Hong Kong-Macao Greater Bay Area serves as a positive attempt for a "super-sovereign digital currency" and will offer a testing ground to the prospective "issuance of a global digital currency led by China".

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