

THE DEVELOPMENT OF CHINESE SOVEREIGN DIGITAL CURRENCY BASED ON RCEP

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ABSTRACT

RCEP would conduce to increase the investment and trade dependence of member countries. With the increasingly close economic and trade relations in East Asia, the dependence of East Asian countries on the United States and the European Union would decrease to a certain extent. Meanwhile, it would also affect the status of the U.S. dollar, euro and sterling in Asia. The China Yuan (CNY), by contrast, would be more widespread. This would further accelerate the process of CNY internationalization. Under the RCEP framework and in the context of the global epidemic situation, China needs to integrate the RCEP rules with the "Trinity" strategy to promote the orderly, stable and sustainable development of CNY internationalization. Qualitative content analysis has been used in this article to investigate the implications of the signing of the Regional Comprehensive Economic Partnership (RCEP) for the internationalization of CNY. Furthermore, to explore the development direction of internationalization of CNY in the context of the uncertain international political and economic environment, which is under the RCEP. Considering that sovereign digital currency could improve the effectiveness of monetary policy and supervision capacity, and thus improve the financial risk prevention and control system of regional countries. Consequently, Chinese sovereign digital currency based on blockchain technology could become an effective path for the internationalization of CNY under the RCEP framework.

Keywords:

Regional Comprehensive Economic Partnership (RCEP), Sovereign Digital Currency, Central Bank Digital Currency (CBDC), China Yuan (CNY), Blockchain Technology

INTRODUCTION

After the Great Depression of 1929, the global gold standard was completely wiped out, the United Kingdom completely withdrew from the center stage of the global economy, and the United States replaced it as the center of the Bretton Woods System (Li, 2018). Since then, the United States, with its sound financial system and huge financial markets, has hosted the world's largest foreign exchange, stock and gold markets. At the same time, the dollar in international trade and international foreign exchange reserves and other aspects of a huge scale advantage. Although the Jamaica system does not provide a standard currency, the US dollar still holds a monopoly position in the international financial payment system (Li, 2018). As the era of sovereign credit currency, the currency issuance of each country lacks supervision and restriction. Especially now, in the face of the COVID-19 pandemic, central banks are adopting quantitative easing monetary policies to boost their economies and rescue them. The different monetary systems adopted by different countries bring high costs and complexity between currency exchanges (Zhang et al., 2019). The current complex international political and economic environment promotes the issuance of sovereign digital currency and the reconstruction of international financial payment system.

The Regional Comprehensive Economic Partnership (RCEP) had been formally signed in November 2020 (Shen, 2021). This marks the official birth of the world's largest free trade area, which is dominated by Asian economies. The population, economic aggregate and intra-regional trade of RCEP members account for about 30% of global trade volume, which on the basis of the ten ASEAN countries, plus China, Japan, South Korea, Australia and New Zealand (Shen, 2021). It is the largest free trade area in the world and of great significance to the economic integration of Asia (Shen, 2021).

Several scholars (i.e. Zhang, 2021; Shen, 2021) noted from their studies that as the main export target of southeast Asian economies, China runs a huge economic deficit against the whole of Southeast Asia every year. The RCEP signing marks that China will be the dominant and influential voice in southeast Asia's free trade. With the Belt and Road Initiatives proposed and built earlier, the world's largest free trade zone will break away from the dominance of the United States for the first time. It will be dominated by China, the single largest player of regional economy and market. In the face of a large number of trade settlement demands in the region, China Yuan (CNY) will gradually dominate the whole process. And to reduce the substantial trade costs incurred in the region's international trade as a result of the use of the United States dollar as the intermediary currency. In addition, a large proportion of regional international trade in RECP countries is cash crops such as food and fruit, which has a rigid demand for the speed and convenience of customs clearance and settlement time (Ping & Chen, 2013). Therefore, digital currency and convenient international financial payment system would be the first choice for trade in the region.

Qualitative content analysis was used in this article to investigate the implications of the signing of the Regional Comprehensive Economic Partnership (RCEP) for the internationalization of CNY. Furthermore, this study explored the development direction of internationalization of CNY in the context of the uncertain international political and economic environment, which is under the RCEP. The sovereign digital currency could improve the effectiveness of monetary policy and supervision capacity, and thus improve the financial risk prevention and control system of regional countries. Consequently, this paper explored whether Chinese sovereign digital currency based on blockchain technology could become an effective path for the internationalization of CNY under the RCEP framework.

LITERATURE REVIEW

Blockchain technology is the underlying technology for digital currencies and the supporting technology for issuing them. The existing research provides an exhaustive classification of digital currencies with respect to their different characteristics. Meanwhile, a large number of studies have examined digital currencies in comparison with legal tender. In addition, the legal compensation of the existing digital currency is also discussed.

Non-anchored Private Digital Currency

Liu and Song (2020) noted from their study that digital currency could be divided into three categories: non-anchored private digital currency, digital stablecoin and central bank digital currency (CBDC). The evolution of its functions has experienced three stages: asset, currency and payment network. Non-anchored private digital currency is represented by Bitcoin, also referred to as cryptocurrency, which is defined as a decentralized token that has no issuer or does not represent any underlying asset or institutional liability (Barontini & Holden, 2019). Despite being called money, non-anchored private digital currencies are not recognized as money, but more as assets. Liu and Song (2020) noted that the primary characteristic of such digital currencies is that they are an asset whose value is determined by the relationship of supply and demand. Unlike traditional currencies, non-anchored private digital currencies are not a liability of an individual or institution, nor are they backed by any state, other than the general merchandise, its intrinsic value is zero (Liu & Song, 2020). The value of such digital currency depends only on the belief that it could be exchanged for some commodities/services or a certain amount of sovereign currency. Similarly, Kirkby (2018) define that more like an asset used to speculate rising prices or defend against inflation, such cryptocurrencies could coexist with the existing fiat currency system as a safe haven asset.

Digital Stablecoin and Central Bank Digital Currency

According to Li (2018), with the deepening globalization of international economy and trade, most banks in the world have used SWIFT system for international business settlement. Founded in 1973, Society for Worldwide Interbank Financial Telecommunications (SWIFT) is a non-profit cooperation organization among international banks. The widespread use of its system has enabled international financial settlement business to have a convenient, efficient, safe and reliable standardized communication service system, which has greatly improved the settlement speed of international banks (Li, 2018).

With the rapid development of mobile internet, the internet giant Facebook, which has 2.4 billion social network users worldwide, has launched the Libra Cryptocurrency Project. Visa, Mastercard, Paypal and other large institutions have been involved in the project (Rirsch & Tomanek, 2019). Moreover, few recent scholars (i.e. Hao, 2020; Rirsch & Tomanek, 2019) note that to better promote Libra, it chooses to link deposits or government bonds in a basket of currencies. This is more in line with the popular mindset than cryptocurrencies such as Bitcoin, which have no asset support. In April 2020 Libra project released its version 2.0, defining it as a settlement currency for a "global payment system" to avoid challenging monetary sovereignty. At the same time, the explicit reference to money fund management to deal with the risk of a possible run.

The digital stablecoin is a digital currency designed to maintain a stable value relative to a specific asset pool or basket of assets (Financial Stability Board [FSB], 2020). In recent years, major financial institutions and technology companies have launched digital stablecoin programs, most notably Libra, which was launched by Facebook. Meanwhile, many central banks have noted that digital currencies could enhance the effectiveness of monetary policy and enhance regulatory capacity. Hence the central bank began to work on the development of its digital currency. According to Kiff et al., (2020), a central bank digital currency is a digital representation of a sovereign currency issued by a country's central bank (or other monetary authority) as its liability. Central bank digital currencies could be divided into wholesale and retail categories, the former restricted to banks and other members of the national payment system, and the latter widely available to the public (Kiff et al., 2020). Central bank digital currency has sovereign credit, which is worthy of the name of "currency".

Legal Compensation of Currency

The legal compensation of currency means that the currency recognized by law has legal solvency for a specific range of debts, the currency with legal compensation is called "legal tender" (Ke, 2020). In a few recent studies (i.e. Ke, 2020; Pistor, 2013), giving money legal compensation could affect the currency circulation, and giving or prohibiting the negotiability of payment instruments will also affect the implementation of legal compensation. For instance, Bitcoin could be used as a medium of Commodity Exchange in a specific field to some extent, so it has the characteristics of negotiability. Nevertheless, in some countries, Bitcoin is legally prohibited from circulation, so it is not tradable, let alone legal compensation.

Blockchain Technology

Blockchain technology is the underlying technology for digital currencies and the supporting technology for issuing them. Blockchain technology includes hash algorithm, Merkle tree, timestamp service, proof of work mechanism, proof of interest mechanism, P2P network technology, asymmetric encryption technology and other comprehensive technologies, which solves the problem of "decentralization" and "double payment" in the application process of digital currency (He et al., 2017). The application of blockchain technology means that digital currency adopts a distributed security protection system. The transaction parties of digital currency need to be authenticated,

otherwise they cannot be included in the system, which greatly improves the security and legitimacy of digital currency.

According to Bao (2020), blockchain technology provides an efficient public ledger system and credit management database system for the creation of sovereign digital currencies. The development of blockchain technology provides the technical basis for bookkeeping credit and account management for the issuance and circulation of sovereign digital currencies. In fact, blockchain is a distributed ledger system and database system that could be shared by all. Moreover, Bao (2020) states that blockchain technology involves many applied technologies and theoretical disciplines such as modern mathematics, Internet technology, computer technology, cryptography and digital security. With the help of blockchain technology, a global public ledger system of sovereign digital currency and a database system of value circulation could be created.

Since the beginning of the 21st century, contrary to the rapid integration of China's economy into the global market, the United States, under the leadership of the new administration, is rapidly decoupling from the global industrial chain and actively promoting the return of manufacturing to the United States (Zhang & Li, 2021). However, in this era of globalization, the interests of all countries are deeply intertwined. The formation and development of global industrial and supply chains are the result of the joint action of market rules and enterprise choices. The anti-globalization would weaken the political and economic dominance of the United States in the international arena, and further would weaken the international financial trade payment system dominated by the United States based on the dollar unit of account. In the current special political and economic environment, coupled with the COVID-19 pandemic, the international financial payment system is faced with the need and opportunity of institutional reform. As a leading country in RCEP cooperation and the world's second largest economy, China has been promoting the internationalization of the CNY. Considering that sovereign digital currency could improve the effectiveness of monetary policy and supervision capacity, and thus improve the financial risk prevention and control system of regional countries. Based on the articles reviewed, it is reasonable to assert that the distributed payment networks with digital currencies have the potential to reshape the global cross-border payment system, and show some advantages in economic efficiency and market structure. Therefore, the exploration and construction an effective path of the internationalization of CNY under RCEP framework is highly foresight.

RCEP WOULD SPEED UP THE INTERNATIONALIZATION OF CNY

The formation of a large integrated RCEP market has increased the frequency of investment and trade exchanges in the region, and the huge market potential should be tapped and unleashed (Chang, 2020). Meanwhile, such a large trade scale will be conducive to the wider popularity of CNY in the Asia-Pacific region and the process of CNY internationalization. The influence of RCEP on trade in goods, trade in services and industrial chain could promote the recognition of CNY in regional trade. RCEP would facilitate the development of regional trade through tariff-free, thus advancing the process of RMB internationalization. In terms of trade in services, the signing of the RCEP would boost cooperation in tourism and infrastructure projects between countries in the region, which could create a huge demand for financial services. Therefore, RCEP would speed up the internationalization of CNY.

The Regional Comprehensive Economic Partnership (RCEP) would be consistent with the WTO, more than 90 percent of trade in goods in the region will eventually be tariff-free once the agreement takes effect (Regional Comprehensive Economic Partnership [RCEP], 2019). Due to the high proportion of young people in RCEP member countries, China has a great advantage in consumer electronics, smart home, new energy vehicles and other fields (Chander & Sunder, 2018). Tariff-free on trade in goods within the region would promote various brands created by China for young people

to go global. On the other hand, tariff-free to a certain extent lowers the prices of imported high-quality products in Chinese domestic market, such as Japanese cosmeceuticals, Australian skin care products, Honey from New Zealand, durian from Malaysia and other products. The lower prices of these imported products are most beneficial to relevant import trading companies. According to RCEP (2019), along with the implementation of unified rules of origin, technical standards, customs procedures and quarantine uniform rules, the combined effects of the elimination of tariff and non-tariff barriers will gradually release the trade-creating effects of RCEP. It would significantly reduce intra-regional trade costs and product prices, improve the competitiveness of products of the region. In addition, it also benefits enterprises and consumers of all parties, thus promoting the internationalization of CNY.

In terms of trade in services, the signing of the RCEP would lead to more post-epidemic visa-free travel and visa-on-arrival visits, which would promote tourism in China and ASEAN (RCEP, 2019). Inbound tourism to China and other countries in the region would also usher substantial growth simultaneously. With respect to the development of education, RCEP (2020) has mentioned in Annex III of Chapter VIII of the agreement that there would be new opportunities in various kinds of sino-foreign joint education and overseas study business between member countries. RCEP (2020) has made a large number of regulations on intellectual property rights in which mentioned in Chapter XI of the agreement. Thus, China's service exports would increase significantly no matter big data, cloud computing and artificial intelligence projects, or comprehensive projects such as game, short video production, online education and online medical treatment. According to Xie et al. (2019), smart city provides a relatively perfect solution to solve a host of economic, social and environmental problems caused by the rapid urbanization of the world population. Consequently, the market for railways, telecommunications and smart cities across Asia would be huge. Hence there is a huge demand for capital for a lot of infrastructure projects, which will put a big demand on financial services.

RCEP (2019) has declared that the tariff-free and rules of origin would ultimately benefit the entire RCEP member countries in this region. The combination of tariff-free and rules of origin could stabilize the industrial, supply and value chains in the region, thus promoting industrial upgrading. The industrial chain, from research to manufacturing, could produce high value in multiple fields (Bettiol, 2017). For production capacity that is still in low value-added areas, joining RCEP would enable regional countries to carry out production capacity cooperation in multiple fields. The removal of tariff barriers in the RCEP region and the increase of regional trade dependence would promote reshape the industrial chain in East Asia. A more complete industrial chain would bring more space for CNY internationalization. Simultaneously, how to promote the internationalisation of the RMB in an efficient and steady manner under the rcep framework requires exploring the optimal path in the light of the current political and economic environment.

RESEARCH ON THE PATH OF INTERNATIONALIZATION OF CNY UNDER RCEP FRAMEWORK

As an important part of service trade, financial services provide strong support for industrial chain and goods trade. Meanwhile, with the further opening of financial markets among RCEP member countries, risk prevention and control is another major issue that needs to be faced (Li, 2021). Consequently, exploring an effective path for CNY internationalization would be conducive to maintaining the financial security of countries under the RCEP framework and mutual benefits, as well as avoiding potential risks arising from fluctuations in the US dollar exchange rate.

The RCEP Chapter viii on Trade in Services covers all four cross-border classifications of the GENERAL Agreement on Trade in Services (GATS) under the WTO framework (RCEP, 2020). Therefore the RCEP financial Services provisions would facilitate the financial development of

countries in the region in terms of the opening up of products and businesses in insurance and financial markets, as well as the opening of capital markets and the cross-border flow of capital (RCEP, 2020). Capital market and cross-border capital flow include cross-border payment and currency transfer services, foreign exchange business, derivatives business, exchange rate and interest rate instruments, settlement and clearing of financial assets, etc. (Zhao, 2020). They all involve greater openness of money markets, capital markets and easier cross-border capital flows.

With the further opening of financial markets among RCEP member countries, risk prevention and control is another major issue that needs to be faced (Li, 2021). Given the gradient difference in economic development level among RCEP members, regional production capacity cooperation can enhance the stability of regional industrial and supply chains and promote efficient allocation of production factors. At the same time, RCEP members have carried out in-depth cooperation in trade in services, such as telecommunications and finance. However, the global economic and financial development is facing risks and challenges due to the severe impact of COVID-19. In this regard, countries in the region need to improve risk prevention and control systems and closely follow the new trend of cross-border capital flows. Considering the distributed bookkeeping features of the sovereign digital currency, it could enhance the effectiveness of monetary policy and regulatory capacity. Therefore, the sovereign digital currency based on blockchain technology could effectively prevent and defuse financial risks in RCEP member countries.

Li (2021) states that as a leading country in RCEP cooperation and the world's second largest economy, China has been promoting the internationalization of the CNY. This is conducive to the financial security and mutual benefit of all countries under the RCEP framework and avoids potential risks caused by fluctuations in the value of the US dollar. Since 2018, China has launched a new "Trinity" strategy, including vigorously developing the CNY as a pricing currency in commodity transactions, speeding up the opening-up process of China's financial market, and fostering real demand for CNY in neighboring countries (Li, 2021). After the RCEP is signed, China needs to integrate the RCEP rules with the "Trinity" strategy to promote the orderly, stable and sustainable development of CNY internationalization.

Firstly, it should advance the construction of cross-border commodity exchanges and other related infrastructure within the RCEP. Li and He (2018) proposed to expand the cross-border use of CNY through the development of commodity trading, highlighting the construction of trading platforms to promote the development of CNY pricing for bulk commodities. This would promote the use of the CNY as a money of account and enhance the function as a money of account. Secondly, RCEP should be used to reshape China's industrial chain in East Asia. Under the RCEP framework, the East Asian industrial chain will show new trends such as optimization and upgrading of production layout, deepening of division of labor, regionalization of industrial chain and digitalization (Ma & Zhang, 2021). This could stabilize the supply chain and foster real demand for CNY in the RCEP free trade area. Thirdly, RCEP should be combined with the opening of the financial market. Cao and Hao (2016) state that how far the CNY could go internationally depends on the process of opening up the CNY capital account. In addition, the essence of capital account convertibility lies in developing a truly deep financial market that could provide safe and stable products. Thus the geographical advantages should be utilized to cooperate with governments or enterprises in the region to realize the mutual promotion of trade goals and financial goals, so as to promote the internationalization of CNY. The sovereign digital currency could improve the effectiveness of monetary policy and supervision capacity, and thus improve the financial risk prevention and control system of regional countries. Consequently, Chinese sovereign digital currency based on blockchain technology could become an effective path of the internationalization of CNY under RCEP framework.

CONCLUSION

The anti-globalization would weaken the political and economic dominance of the United States in the international arena, and further would weaken the international financial trade payment system dominated by the United States based on the dollar unit of account. In the current special political and economic environment, coupled with the COVID-19 pandemic, the depreciation pressure of US dollar increases sharply. For this reason, the exchange risk of US dollar settlement method increases continuously, which would prompt Southeast Asian companies to look to the CNY as the new reserve currency for trade settlement. After the signing of RCEP, with the rapid expansion of trade in the Asia-Pacific, enterprises in the region should need more CNY as a reserve currency for capital turnover, settlement and commodity procurement. Thus, the process of CNY internationalization is bound to accelerate.

Considering the characteristics of trade between RCEP member countries, digital currency transactions would be increasingly accepted by the masses. Meanwhile, the distributed bookkeeping features of the sovereign digital currency, it could enhance the effectiveness of monetary policy and regulatory capacity. Therefore, the sovereign digital currency based on block chain technology could effectively prevent and defuse financial risks of RCEP member countries. As a leading country in RCEP cooperation and the world's second largest economy, China has been promoting the internationalization of the CNY. The sovereign digital currency could improve the effectiveness of monetary policy and supervision capacity, and thus improve the financial risk prevention and control system of regional countries. Consequently, Chinese sovereign digital currency based on block chain technology could become an effective path of the internationalization of CNY under RCEP framework.

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REFERENCES

- Barontini, C., & Holden, H. (2019, January 8). Proceeding with caution - a survey on central bank digital currency. BIS Papers No.101. <https://ssrn.com/abstract=3331590>
- Bao, J. Y. (2020). Sovereign digital currency, fintech innovation and reform of the international monetary system — On the issuance, circulation and internationalization of digital RMB. *FRONTIERS*, 2020(01), 24-35. <http://dx.doi.org/10.16619/j.cnki.rmltxsqy.2020.02.003>
- Bettiol, M., Burlina, C., Chiarvesio, M., & Di Maria, E. (2017). Industrial district firms do not smile: structuring the value chain between local and global. In *Breaking up the Global Value Chain. Advances in International Management*, 30(2017), 269-291. <http://dx.doi.org/10.1108/S1571-502720170000030011>
- Cao, Y. Z., & Hao, Z. Y. (2016). RMB internationalization, capital account opening and the construction of financial market. *Finance Forum*, 2016(06), 3-7. <http://dx.doi.org/10.16529/j.cnki.11-4613/f.2016.06.001>

- Chander, A., & Sunder, M. (2018). The Battle to Define Asia's Intellectual Property Law: TPP to RCEP. *UC Irvine L. Rev.*, 8(3), 331-361.
- Chang, S. M., Huang, Y. Y., Shang, K. C., & Chiang, W. T. (2020). Impacts of regional integration and maritime transport on trade: with special reference to RCEP. *Maritime Business Review*, 5(2), 143-158. <http://dx.doi.org/10.1108/MABR-03-2020-0013>
- Financial Stability Board (FSB). (2020, April 14). Addressing the regulatory, supervisory and oversight challenges raised by “global stablecoin” arrangements: Consultative Document. <https://www.fsb.org/2020/04/addressing-the-regulatory-supervisory-and-oversight-challenges-raised-by-global-stablecoin-arrangements-consultative-document/>
- Hao, Y. (2020). A study on the impact of Libra on the international monetary system. *International Finance*, 468(6), 32-36.
- He, P., Yu, G., Zhang, Y. F. & Bao, Y. B. (2017). Survey on blockchain technology and its application prospect. *Computer Science*, 44(4), 1-7. <http://dx.doi.org/10.11896/j.issn.1002-137X.2017.04.001>
- Kirkby, R., (2018). Cryptocurrencies and digital fiat currencies. *The Australian Economic Review*, 51(4), 527-539. <http://dx.doi.org/1111/1467-8462.12307>
- Ke, D. (2020). Legal Tender: Also on the Legal Tender Nature of Central Bank Digital Currency in China. *Journal of Shanghai University of Finance and Economics*, 22(6), 123-139.
- Kiff, J., et al., (2020, June 26). A survey of research on retail central bank digital currency. IMF Working Paper. <http://dx.doi.org/10.5089/9781513547787.001>
- Li, X. B. & He, K. (2018). Study on the path of accelerating CNY internationalization process by taking bulk commodity trading as the breakthrough point. *Southwest Finance*, 2018(08), 57-62.
- Li, X. (2018). Financial Rationale and Power of the Dollar System: Monetary and Financial Background of the Sino-US Trade Disputes. *International Economic Review*, 138(6), 52-71.
- Li, Y. N. (2021). Analysis of RMB internationalization development path based on RCEP perspective. *Fortune Today*, 07(2021), 35-36.
- Liu, D. M., & Song, S. (2020). Digital Currency, Cross-Border Payment and International Monetary System Reform. *Finance Forum*, 299(11), 3-10.
- Ma, S. & Zhang, E. Z. (2021). Reconstruction of East-Asian regional industrial chain within the framework of RCEP and China's countermeasures. *Journal of South China Normal University: Social Science Edition*, 2021(04), 19-30.
- Pistor, K. (2013). A legal theory of finance. *Journal of Comparative Economics*, 41(2), 315-330. <https://doi.org/10.1016/j.jce.2013.03.003>
- Ping, H., & Chen, S. (2013). RCEP and China's Asia-Pacific FTA Strategy. *China Int'l Stud.* 40: 138.
- Regional Comprehensive Economic Partnership (RCEP). (2019, October 6). Guiding Principles and Objectives for Negotiating the Regional Comprehensive Economic Partnership. <https://rcepsec.org/wp-content/uploads/2019/10/RCEP-Guiding-Principles-public-copy.pdf>
- Regional Comprehensive Economic Partnership (RCEP). (2020, November 14). Regional Comprehensive Economic Partnership Agreement Chapter 8 – Trade in Services Annex 8C (Professional Services). <https://rcepsec.org/wp-content/uploads/2020/11/Chapter-8-Annex-8C.pdf>
- Rirsch, R., & Tomanek, S. (2019). Facebook's Libra: A case for capital markets supervision? *Journal of Payments Strategy & Systems*, 13(3), 255-267.
- Shen, J., (2021). The Problems RCEP Execution May Face With and Ways of Risk Prevention. *Regional Economic Review*, 1(2021), 122-129.
- Xie, J., Tang, H., Huang, T., Yu, F. R., Xie, R., Liu, J., & Liu, Y. (2019). A survey of blockchain technology applied to smart cities: Research issues and challenges. *IEEE Communications Surveys & Tutorials*, 21(3), 2794-2830. <https://doi.org/10.1109/COMST.2019.2899617>

- Zhao, X. L. (2020). The impact of RCEP financial Service Clauses on China's financial opening. *China Forex*, 24(2020), 40-41.
- Zhang, W., Dong, W., & Zhang, F. Q. (2019). The impact of central bank digital money on payments, monetary policy, and financial stability. *Shanghai Finance*, 462(1), 59-77.
- Zhang, X. Y. (2021). RCEP regional economic integration under the background of China's economic development and countermeasure research. *Economy and Management Digest*, 771(9), 1-2.
- Zhang, S. X., & Li, W. W. (2021). Deconstruction of RCEP's Significance for the Development of China and the Asia-Pacific Region. *Theoretical Investigation*, 219(2), 80-86.