Summary of Webinar
FSDC Industry Exchange Series

Webinar title

Zooming in: The Rise of Digital Currencies and Payment Methods

Speakers

Panellists

- Dr Dorothy Chau, Director of Hong Kong, Macao & Cross-border Financial Affairs, Tencent
- Ms Angelina Kwan, Group Chief Operating Officer & Risk Officer, Hashkey
- Prof Michael Sung, Chairman, CarbonBlue Innovations; Founding Co-director, Fudan Fanhai Fintech Research Center, Fanhai International School of Finance, Fudan University

Moderator

- Dr King Au, Executive Director, FSDC

Discussion Summary

1. Digital Payment and Virtual Assets

Covid-19 has accelerated the adoption of digital payments even among elderly people because of convenience and avoidance of "dirty cash". Taking Hong Kong as an example, many stores in wet markets have installed contactless payment systems since late 2020 thanks to a subsidy scheme from the HKSAR Government. Furthermore, the use of electronic red packets through Tencent's

e-payment application doubled to several million this Chinese New Year compared to the last one.

With more high-profile companies, such as Tesla, American Express and Square, expressing interest in cryptocurrencies, Angelina believed many institutional and high net worth investors would include non-traditional virtual assets in their portfolios for diversification. According to Hashkey's observation, up to 50% of the institutional investors would be involved in virtual assets either directly or indirectly by the end of 2021.

The benefits of blockchain technology were highlighted with China's blockchain electronic invoicing, which was first introduced in Shenzhen in 2018, as an example. In essence, blockchain invoicing allows companies to reduce operation cost through automation and customers to obtain invoices at their own leisure.

Tokenization was also identified by Angelina as a major trend in modern finance. As an illustration, companies could use smart contracts to tokenize assets, such as receivables, to generate liquidity, investment income and long term value by the creation of new digital assets for investors through virtual asset exchanges/platforms. The competition to become the regional virtual asset trading centre is intense. Long term success requires support, commitment and strategic planning from Governments and regulators.

Currently, there are 2.8 billion credit cards and 2.3 billion of smartphone users worldwide. From these data, we know the importance of giving consumers a streamlined, smooth and convenient shopping experience through digital payment. In China, the amount of non-bank electronic payments is already double that of credit card payments. The trend is expected to continue with digital payment becoming more seamless and removing many pain points such as handling cash, entering identity protection pins or carrying physical cards.

With voice activated payments gaining momentum, customers are communicating more with their virtual assistants on their smartphones. The Amazon Alexa, which allows users to make online purchases by voice through

their Amazon accounts, is a case in point. As AI technology advances further, a more interactive automation or concierge experience, as Dorothy would describe it, is to be expected going forward. The internet of things may enable us to conduct frictionless and contactless transactions through biometric scans and voice automation. This type of invisible payments will come to dominate the market in future.

2. Central Bank Digital Currency (CBDC) and Private Digital Currency

China is currently the leader in CBDC with the imminent commercialization of the digital RMB or eCNY. A unique feature of the eCNY trial in China was that the digital money had an expiry date after which the eCNY would disappear from the digital wallet. Michael emphasized the importance of programmable digital money to effective implementation of monetary stimulus in future. The enormous stimulus packages issued by the US Government during the global financial crisis in 2008 could have been much more effectively targeted with digital money programmed for specific productive economic activities, like food stamps, only but not for share buybacks or other investment activities etc.

Most importantly, true financial inclusion for the unbanked population would be made possible by programmable money as financial transactions could be conducted without a bank account. Programmable money would also have many practical applications in our daily lives such as personal tax filing with just one click as cash flow information could be provided to the tax bureau with consent from individuals or the data owners. Another useful application would be the issuance of healthcare vouchers with specific expiry date and designated medical usages. Most importantly, programmable money could mean true financial inclusion for the unbanked population as there are far more mobile users than bank account holders globally.

CBDC is fast becoming a reality in the next few years as indicated by a recent BIS report stating that 86% of the 65 surveyed central banks are actively conducting CBDC research. As each country would develop their own CBDC system, the key issue is one of interoperability. In fact, the BIS tried to address this interoperability issue in a recent paper [1] by proposing three different

[1] https://www.bis.org/publ/bppdf/bispap115.pdf

conceptual approaches to cross-border multi-CBDC (mCBDC) arrangements as follows:

(1) Private sectors to provide linkage to mCBDC similar to traditional payment systems

(2) A centralized or decentralized clearing system as the bridge to mCBDC

(3) A single mCBDC multi-currency system with a common rule book and governance arrangement.

The future world of digital currencies would be a mix of private sector stable coins and central bank digital currencies, all which can eventually be settled in bilateral trade currencies without the need for intermediation according to Michael. These settlement systems can be centralised exchanges operated by governments or the private sector, or perhaps completely decentralised. This requires key enabling interoperability infrastructure to allow these digital currencies to traverse between blockchain/IT ecosystems. A development that would be beneficial to the world economy as a whole due to the removal of many existing barriers to cross-border economic activities.

For public sector sponsored schemes in Asia, we have the HKMA working with the BOT, CBUAE and PB DCI[2] as well as the MAS completing project Ubin[3].

There are also many public private partnership initiatives such as China's block-chain based service network (BSN) upgrading to a universal digital payment network (UDPN)[4].

At the other end of the spectrum, there are fully decentralized peer to peer financial systems being built on blockchain based technology which is collectively known as Decentralised Finance or DeFi. Many Decentralized Exchanges (DEX) have been created with the advent of Automatic Market Makers (AMM) technology, which has transformed DeFi from an insignificant market in 2019 to over US$45 billion in just over a year.

[2] https://www.hkma.gov.hk/eng/news-and-media/press-releases/2021/02/20210223-3/

[3] https://www.mas.gov.sg/schemes-and-initiatives/project-ubin

[4] https://medium.com/bsnbase/bsn-2021-outlook-e2e6841db51b

Private digital currencies would also need to be connected with global CBDC systems in the future for interoperability and regulatory compliance. An example is the AML/CFT challenges associated with the increasing cross-border transactions of virtual assets. This has led to the Financial Action Task Force introducing a "Travel Rule" for virtual asset service providers (VASPS) such as cryptocurrency exchanges and cryptocurrency wallet providers. In summary, each country will have their own regulatory framework for virtual asset trading to protect the investing public. HK, Singapore and Malaysia have all taken a proactive approach to licensing VASPS.

Talent development is essential to successful adoption of new technologies, especially the e-payment industry which is highly innovative. To remain competitive in the digital economy, companies must ensure their senior management teams have the adequate understanding of technological trends and equip themselves with a fail-fast culture to shorten the time to market. The need to recruit and retain talent with the right fintech skills and entrepreneurial mindset is of paramount importance for continuous success. On this note, HK is encouraged to raise the standard of STEM education, with all the key stakeholders working closely together, to fully capitalize on the exciting opportunities ahead such as the integration with the Great Bay Area's advanced digital economy.

The introduction of programmable money will open up a whole new world for data analytics as digital transaction data will be connected with useful information linked to the real economy use cases. It is envisaged that there will be enormous competition for data acquisition and analytical capabilities. We believe the financial services industry of the future would not be the same as we know it today!