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BOCHK completes Phase 2 of the e-HKD Pilot Programme Validating the technical application and value of digital currency in two commercial use cases

Bank of China (Hong Kong) ("BOCHK") has completed Phase 2 of the e-HKD Pilot Programme under Project e-HKD+ by the Hong Kong Monetary Authority. During this phase, the Bank validated the programmability feature of digital currency through the prepayment and dedicated fund use cases, exploring practical commercial applications of e-HKD in a retail setting.

In the prepayment use case, BOCHK utilised its self-developed consortium blockchain to introduce an innovative "Unified Wallet" concept. Upon identity verification, customers are provided with a dedicated "Unified Wallet", enabling seamless connection to mobile applications from various banks for managing their hypothetical e-HKD. Throughout the transaction process, both customers and banks are required to perform digital signature authentication. Smart contracts are utilised to ensure that prepaid transactions are executed according to predefined conditions, thereby safeguarding funds for customers and merchants. To validate the use case in a real-world environment, BOCHK collaborated with another bank to invite nearly 500 employees to use hypothetical e-HKD prepaid vouchers for purchases at Pacific Coffee, completing over 1,500 transactions.

BOCHK has also partnered with Sanfield (Management) Limited to develop an optimised fund management solution for the dedicated fund use case. Utilising the programmability feature of smart contracts, payments are automatically transferred to designated accounts upon meeting predefined conditions, thereby protecting and balancing the rights and interests of all stakeholders.

Ethan Chen, Deputy General Manager, Innovation and Optimisation Centre of BOCHK, said, "A survey conducted by BOCHK revealed that nearly 70% of the pilot participants had previously engaged in prepaid consumption. However, among all survey participants, more than 40% expressed concerns about not being able to redeem services, while over 20% highlighted the lack of a refund mechanism in prepaid transactions. To enhance payment experience, BOCHK has completed technical validation of the 'Unified



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Wallet' and smart contracts in the prepayment use case, unlocking the potential of digital currency in commercial applications. We have also verified the practical feasibility of smart contracts in the dedicated fund use case. The Bank will publish the research results this year and remains committed to exploring diverse commercial applications for digital currencies, contributing to the vibrant development of fintech in Hong Kong."

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