



Standard Chartered Hong Kong and Giesecke+Devrient announce key findings of its e-HKD pilot study on offline payment

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Munich

Giesecke+Devrient

Standard Chartered Bank Hong Kong Limited (Standard Chartered Hong Kong) together with Giesecke+Devrient (G+D) recently concluded trials in the Hong Kong Monetary Authority's (HKMA) [e-HKD Pilot Programme](#). Study results show that close to 80 percent of consumer participants see value in offline payment capability of hypothetical e-HKD. Offline capability and interoperability are two of the key factors to help future widespread adoption.

The tests and experience sessions included a range of real-life scenarios involving public transport, restaurants, small retailers and university campus, designed to explore the hypothetical e-HKD's potential benefits and viability as an alternative to cash. Use cases were showcased at the Standard Chartered Hong Kong exhibition booth during [Hong Kong FinTech Week 2023](#), enabling visitors and event attendees to experience and interact with the hypothetical e-HKD.

The pilot, which was conducted between May to October 2023, demonstrated how a digital currency can operate without its fundamental element of being connected to the internet.

During the pilot, a number of offline payment applications were tested with the support of G+D, the advisor for Standard Chartered Hong Kong's 2018 banknote series, and applied its Central Bank Digital Currency (CBDC) technology focused on enabling a public means of payment. When combined with secure hardware, the technology provides the essential infrastructure and governance mechanisms to ensure trust and integrity within the CBDC ecosystem.

For offline transactions, digital tokens are stored within the secure element of a hardware wallet, including smart cards, mobile phones, or wearables. The payment mechanism fully supports offline capabilities, enabling transactions without internet connection, access to electricity, or dependence on a third party for settlement. It also enables real-time and secured consecutive dual offline payments.

The pilot also helped identify factors, including 'Offline capability' and 'Interoperability', that pilot participants found it critical to the success of the future e-HKD, if it is to be introduced. These include enabling transactions to be conducted smoothly and securely under all circumstances and available to all, while allowing consumers to use their preferred network and digital wallet for the hypothetical e-HKD transactions.

While the pilot results establish a strong reference for hypothetical e-HKD applications, potential areas for further research were identified, including:

- ➔ Develop a common standard that all platforms could leverage for building a common payment ecosystem.
- ➔ Explore other viable offline payment channels beyond physical smart cards and smartphones.
- ➔ Design of a cost-effective infrastructure for the bank to operationalize e-HKD which could improve the speed, efficiency and implementation cost.

Esther Mai, Head of Digital Banking, Client Experience and Analytics, Consumer, Private and Business Banking, Standard Chartered Hong Kong, said, "We are excited that close to 80 percent of consumer participants in the pilot see the hypothetical e-HKD could potentially address their current payment needs, while merchants also found the offline payment solution user-friendly and a complement to the existing digital payment methods. The insights about the importance of the interoperability and offline capability of hypothetical e-HKD have laid a solid foundation for our future studies. We look forward to supporting Hong Kong Monetary Authority in the next phase of the e-HKD Pilot Programme."

Raoul Herborg, Managing Director CBDC, Giesecke+Devrient said, "G+D is deeply honoured to have partnered with Standard Chartered Hong Kong for the e-HKD Pilot Programme. Our combined expertise complements and supports the innovation ecosystem that will be instrumental in shaping the future of public currency. We look forward to continue working closely with the Hong Kong Monetary Authority and Standard Chartered Hong Kong to bring innovation and build resilience for Hong Kong's payment infrastructure."

About Giesecke+Devrient

Giesecke+Devrient (G+D) is a global SecurityTech company headquartered in Munich, Germany. G+D makes the lives of billions of people more secure. The company shapes trust in the digital age, with built-in security technology in three segments: Digital Security, Financial Platforms and Currency Technology.

G+D was founded in 1852 and today has a workforce of more than 14,000 employees. In the fiscal year 2022, the company generated a turnover of 2.53 billion euros. G+D is represented by 123 subsidiaries and joint ventures in 40 countries.

Further information: www.gi-de.com.

About Standard Chartered

We are a leading international banking group, with a presence in 53 of the world's most dynamic markets and serving clients in a further 64. Our purpose is to drive commerce and prosperity through our unique diversity, and our heritage and values are expressed in our brand promise, here for good.

Standard Chartered PLC is listed on the London and Hong Kong Stock Exchanges.

The history of Standard Chartered in Hong Kong dates back to 1859. It is currently one of the Hong Kong SAR's three note-issuing banks. Standard Chartered incorporated its Hong Kong business on 1 July 2004, and now operates as a licensed bank in Hong Kong under the name of Standard Chartered Bank (Hong Kong) Limited, a wholly owned subsidiary of Standard Chartered PLC.