Conclusion report from Bank of Thailand envisages innovation potential of a retail CBDC

(2024-05-08) (Munich) (Giesecke+Devrient)

The Bank of Thailand (BOT) recently released the report of its Retail Central Bank Digital Currency (CBDC) pilot project which it conducted on Giesecke+Devrient´'s (G+D) technology solution. In the project, the central bank tested the technological design of a digital version of the Baht and its potential for financial innovation.

According to the Bank of Thailand's report, the pilot delivered four key lessons: First, a CBCD is capable of supporting multiple online and offline retail payment use cases. Second, it can also serve as a catalyst for innovation and pave the way for programmable payments. Third, as an open infrastructure, it can be accessed by all types of payment service providers, not just banks. And finally, a retail CBDC can increase the resilience as an alternative to the existing payments infrastructure.

The central bank carried out the pilot project from late 2022 to October 2023. It used G+D's Filia retail CBDC solution to set up an environment for the whitelisted payment service providers, retailers and end users. The use cases tested included online transactions via QR codes and a wallet ID between individuals, and between individuals and merchants. The Bank of Thailand also tested offline payments without a network connection using payment cards. Finally, a hackathon was held to ideate innovative use cases for a retail CBDC. The first prize was awarded to an allowance wallet use case: "Grow up wallet", enabling parents to set payment policies for their children using a retail CBDC.

Under the pilot, G+D's Filia solution has been assessed throughout end-to-end process lifecycle of issuing, distributing, validating, and burning CBDC on various technical perspectives. Filia solution is specially designed as a token-based architecture and it offers maximum privacy data protection while resiliently operates with decent performance. Comparable to physical cash management, the central bank can guarantee the validity of the digital tokens and verify a transaction without dependencies on either wallet or user information. Filia also enables simple configurability of programmable payments. Payment service providers can easily integrate the solution into their own systems using the Software Development Kit (SDK). The ability to support consecutive offline transactions is also taken into one of the key considerations, too.

While there is currently no concrete plan to officially issue a retail CBDC, the Bank of Thailand will utilize the findings of the pilot project for other areas and future studies to enhance the payment system. "The BOT believes that the results of the pilot project will be invaluable for the further development of Thailand's payment infrastructure, benefiting both financial institutions and the general public in the future," the final report stated.

"We are very proud that the Bank of Thailand has chosen us as a technology partner for its groundbreaking pilot

project," says Dr. Raoul Herborg, Managing Director CBDC unit at G+D. "This project has impressively demonstrated that a digital form of public money can promote competition among payment service providers, enable financial innovation, and provide efficient and cost-effective services to the public."

The final report can be downloaded here: [Retail CBDC Pilot Program – Conclusion Report](#)■

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 2023, the company generated a turnover of 3 billion euros. G+D is represented by 123 subsidiaries and joint ventures in 40 countries.

Further information: www.gi-de.com.