

# HSBC Pioneers Quantum-Safe Technology for Tokenized Gold

September 20, 2024



**HSBC, a leading global bank, announced today that it has successfully piloted quantum-secure technology for buying and selling tokenized physical gold. This achievement marks a significant step forward in protecting digital assets from potential future quantum computing attacks.**

In 2023, HSBC became the first global bank to offer tokenized physical gold to institutional investors using distributed ledger technology (DLT). This year, the bank further expanded its offerings by launching HSBC Gold Token for retail investors in Hong Kong, enabling them to acquire fractional ownership of physical gold. Both launches leverage the technology of the HSBC Orion digital assets platform.

HSBC also conducted a successful test of the interoperability of its gold tokens using post-quantum cryptography (PQC). This technology allows for the secure movement of digital assets across distributed ledgers via secure networks, addressing the evolving needs and regulations of clients. The pilot included the capability to convert HSBC's gold tokens into ERC-20 fungible tokens, enhancing distribution and interoperability with other DLTs and digital wallets.

In partnership with Quantinuum, the world's largest integrated quantum computing company, HSBC utilized PQC algorithms and Quantum Origin quantum randomness technology to demonstrate holistic protection of digital assets, such as HSBC gold tokens, from quantum computing attacks. This includes safeguarding against "store now, decrypt-later" (SNDL) cyber incidents, a technique that involves stealing sensitive data now and storing it for decryption using future quantum computers.

Philip Intallura, Global Head of Quantum Technologies, HSBC, said: "HSBC was the first international bank

to offer tokenised physical gold and is now building on that innovation with cutting-edge cybersecurity protection for the future. This pilot successfully demonstrated the viability of deploying these advanced technologies for a real-world business environment.”

Ilyas Khan, Quantinuum founder and Chief Product Officer, said: “As long-time partners in exploring commercial quantum applications, HSBC and Quantinuum are together building the next generation of financial services featuring quantum-hardened defences harnessing the power of today’s quantum computers to safeguard sensitive data now and into the future.”

This milestone highlights HSBC’s commitment to staying at the forefront of technological advancements and ensuring the security of its digital assets. By leveraging quantum-secure technology, HSBC is taking proactive steps to protect its clients’ investments and stay ahead of potential cyber threats.