Aptos Labs, BCG, and Hang Seng Joint Digital Money Pilot Findings

Phase 2 of e-HKD Pilot Program: Settlement of Tokenized Assets

1 Pilot Use Case Overview: Use of digital money for tokenized fund investment

Against a backdrop of rapidly evolving digital money and tokenization worldwide, Aptos Labs, BCG, and Hang Seng Bank collaborated in a joint pilot to validate the commercial viability of using a new form of digital money (e-HKD, a central bank digital currency in Hong Kong) to settle tokenized funds on a public-permissioned blockchain.

Within the Hong Kong Monetary Authority's (HKMA) e-HKD sandbox, the pilot minted hypothetical e-HKD onto the Aptos network to facilitate the use case assessment. Aptos, a public blockchain network with permissioned protocols (including native privacy and programmability design), was selected for the pilot, considering its institutional adoption readiness.

The pilot highlighted strong interest from both Chinese Mainland and Hong Kong investors in using new forms of digital money for tokenized funds and underscored the potential for Hong Kong in leveraging digital money and tokenization to further strengthen its role as a leading international wealth management hub.

Use Case: Facilitating transfer of tokenized funds using programmable digital money

Objectives	Enable investors to access enhanced asset liquidity	Streamline cross-border investment operations
Existing pain points with fiat	**Frozen liquidity in settlement cycle** The proceeds from fund redemption often take several days to settle to end-investors due to batch processing, multiple layers of intermediaries, and cross-border money transfers, which impacts timely access to liquidity.	**Costly cross-border money flows** Cross-border investments involve multiple correspondent banks and clearing channels, resulting in settlement delays, higher transaction costs, and operational inefficiencies in fund investment.
Unique benefits of digital money	**Atomic settlement** End-investors gain enhanced liquidity and flexibility to manage risk through a shorter settlement cycle, with potential to unlock lending power using fund units as tokenized collateral. Distributors and asset managers enjoy a reduced fund settlement workload.	**Digital money programmability** Programmable digital money enables streamlined compliance and ongoing operational efficiency, while allowing additional investment exposure for cross-border investors and more efficient service from distributors.
Addressable markets	All retail investors in Hong Kong, specifically those who prefer greater liquidity when investing in funds.	Cross-border investors who seek diversified financial and wealth management services in markets with foreign exchange management policies (e.g., Chinese Mainland, India, Thailand).

2 Pilot Use Case Design: New forms of digital money help via atomic settlement & programmability

	Current Process	Future Process with New Forms of Digital Money		
		Instant Movement	+ Atomic Settlement With Tokenized Assets	+ Digital Money Programmability
Fund Subscription / Redemption of Investment Fund	**T+1 to T+5** Proceeds are transferred across intermediaries (e.g., distributor, custodian) requiring reconciliation between banks, in addition to fund valuation process	**T+1** Proceeds are settled upon fund valuation completion	**Intra-day/ T+0** Proceeds are settled upon secondary transaction confirmation (e.g., buy/sell order matched)	**Instant compliance check** Programmable digital money embeds compliance rules in every movement of proceeds (e.g., money ringfenced for investing in eligible products)
Using Fund Units as Collateral	**Days/ weeks** Loan proceeds are disbursed along traditional rails, after fund valuation and lengthy processing (e.g., legal agreements)		**Near-instant** Tokenized fund units pledged via smart contract (e.g., DeFi lending pool); loan proceeds can be disbursed instantly	

3 Key Findings: Digital money unlocks investor demand; e-HKD is not a must; compliance and privacy work on public chain

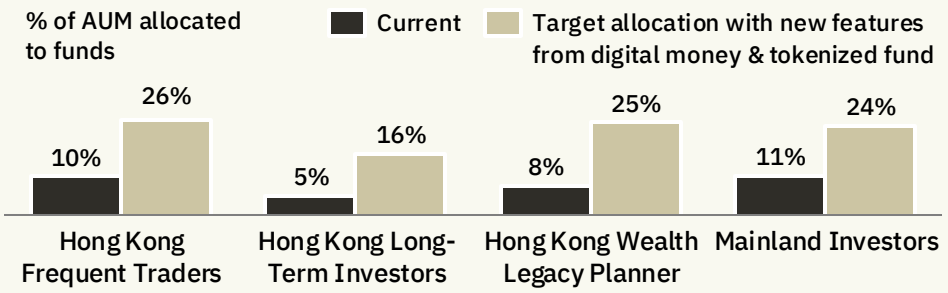
In H1 2025, Aptos Labs, BCG, and Hang Seng conducted a Hong Kong pilot with selected users in Hong Kong and a survey targeting Greater Bay Area investors. The key findings are as follows:

1

Investors have shown strong interest in features created by **combining** new forms of digital money and tokenized funds

- **More than 2x allocation in funds** for the possible new features enabled

How would your fund allocation change if new features were enabled (e.g., immediate receipt of capital upon redemption, access to additional products, use as collateral for short-term financing)?



2

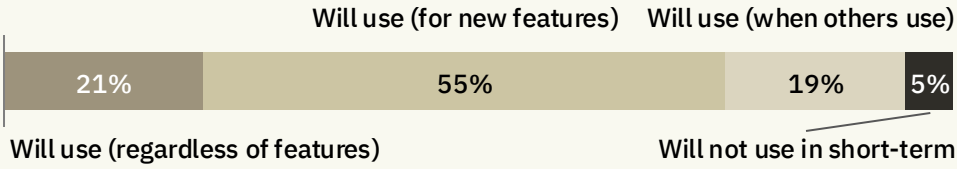
e-HKD is not a must for our use case, as features can be enabled by either tokenized deposits or stablecoins

- **All major forms of Digital Money can support** features required by our use case
- **~76%** of respondents would adopt regulated digital money, and **~95%** would use them for tokenized fund transactions

Digital Money Feature Comparison for our Use Case in Hong Kong

	e-HKD	Tokenized Deposits	Stablecoins
Instant Money Movement	✓ **Feasible**	✓ **Feasible**	✓ **Feasible**
Atomic Settlement	✓ **Feasible**	✓ **Feasible**	✓ **Feasible**
Digital Money Programmability	✓ **Feasible**	✓ **Feasible**	✓ **Feasible**

Will you use the regulated new forms of digital money above for tokenized fund?



3

Public-permissioned blockchain is suitable for our pilot use case

- **Compliance Features**
- **Value-adding Technical Features**
- **Commercial Viability**

Key blockchain features needed for this use case

Public-Permissioned Blockchain (Aptos as an Example)	
Compliance Features	
Transaction & balance privacy	Enabled by **Confidential Asset Standard** (link)
Permission (e.g., Whitelisting)	Enabled by **Fungible Assets Standard** (link)
Value-adding Tech Features	
Speed	**0.11s Block Time**[1]
Scalability (TPS)	**12,933 Max Recorded TPS** (>1M Max Theoretical)[1]
Programmability	Enabled by **Dispatchable Fungible Assets Standard** (link)
Commercial Viability	
RWA Availability	**US$720m** real-world assets value (as of Aug 2025)[2]
Cost Effectiveness	**US$0.00038** average transaction fee (as of 1 Sep 2025)[3]

4 Key Learnings: Unlocking digital money's value requires an ecosystem - standards, compliance, and collaboration

As digital money and asset tokenization accelerate, our pilot and commercial study finds that a regulated digital-asset ecosystem is essential to unlock full value across the fund lifecycle.

1. **Technical Standards** – Common frameworks (e.g., interoperability, programmability, privacy) are needed to reduce adoption friction and ensure seamless connectivity. Aptos Labs, BCG and Hang Seng Bank have also provided input to the Programmability Working Group under the HKMA's e-HKD Industry Forum.
2. **On-chain compliance** – Digital identity and verifiable credentials enable compliance to be built directly into transactions, enhancing trust and auditability.
3. **Ecosystem Collaboration** – Broad adoption of regulated digital money across capital-market participants – from distributors and infrastructures to custodians and tech partners – is critical.

1. Source: https://chainspect.app/chain/aptos; https://medium.com/aptoslabs/shardines-aptos-sharded-execution-engine-blazes-to-1m-tps-71c5f9b8bf60;
2. Source: https://app.rwa.xyz/networks/aptos; 3. Source: https://tokenterminal.com/explorer/projects/aptos/metrics/transaction-fee-average