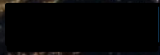


Kakao's CBDC project in Korea



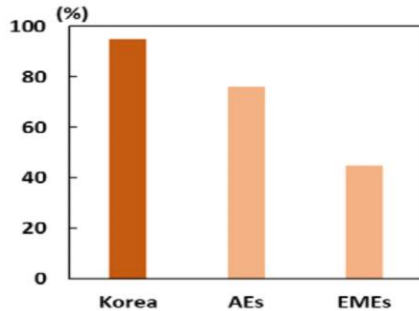
Introduction to the state of fintech and CBDC in Korea

State of Fintech in Korea

Highest smartphone penetration

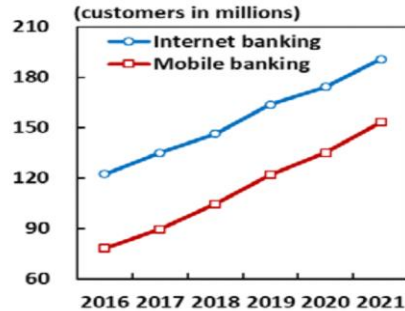
with wide-spread usage of “Internet-only bank” and “Easy payment system”

Smartphone penetration rate



* Source : Bank of Korea(2021)

Number of registered internet banking users



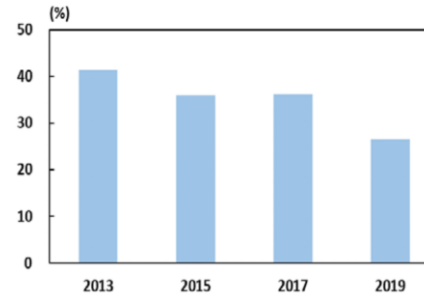
Motivation for introducing CBDC in Korea

Find substitute for decrease in usage of cash

Prepare for global stablecoin penetration

Other reasons (Cross-border efficiency/Promote web3 industry)

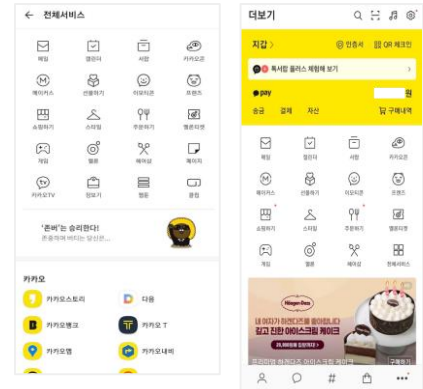
Proportions of cash use in retail transactions



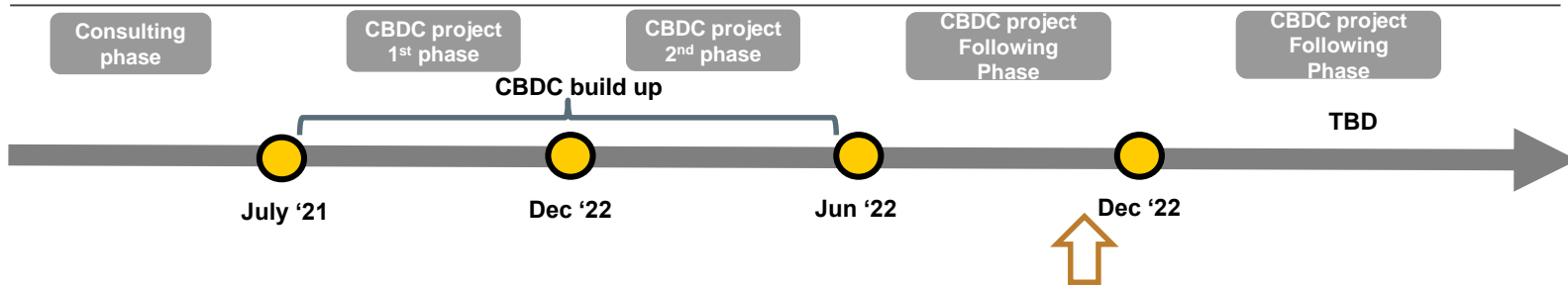
* Source : Bank of Korea(2021)

Kakao's involvement in fintech and CBDC

- Kakao group is the main technology provider for Korea CBDC product
- Kakao group is selected into the Korean project considering it's credible experience operating the finest and largest mobile IT service in the country
- Kakao's 4 major company is involved in the making of Korean CBDC
 - Kakao Enterprise is and will lead the implementation of Korean CBDC
 - * Korean CBDC is built on Kakao Enterprise's i-Cloud service
 - Kakao Krust to take care of CBDC blockchain core
 - KakaoBank to represent and implement internet banking component
 - KakaoPay to represent and implement fintech (mobile app) component



State of Bank of Korea's CBDC Project



- Timeline : Pre-study & Consulting (1yr) > CBDC build up (1yr) > more experiments
CBDC build up (1st phase) : Basic issuance, distribution, redemption
CBDC build up (2nd phase) : Offline card, digital asset purchases, new technologies
- Our Team : 12 companies including
Kakao KRUST, KakaoBank, KakaoPay (Bank & PSP)
Samsung Electronics (Offline CBDC device)
Other local companies to perform additional performance experiments
- Bank of Korea expected to continue on with the CBDC experiment
: BOK to seek for constant functional/performance improvements moving along the way

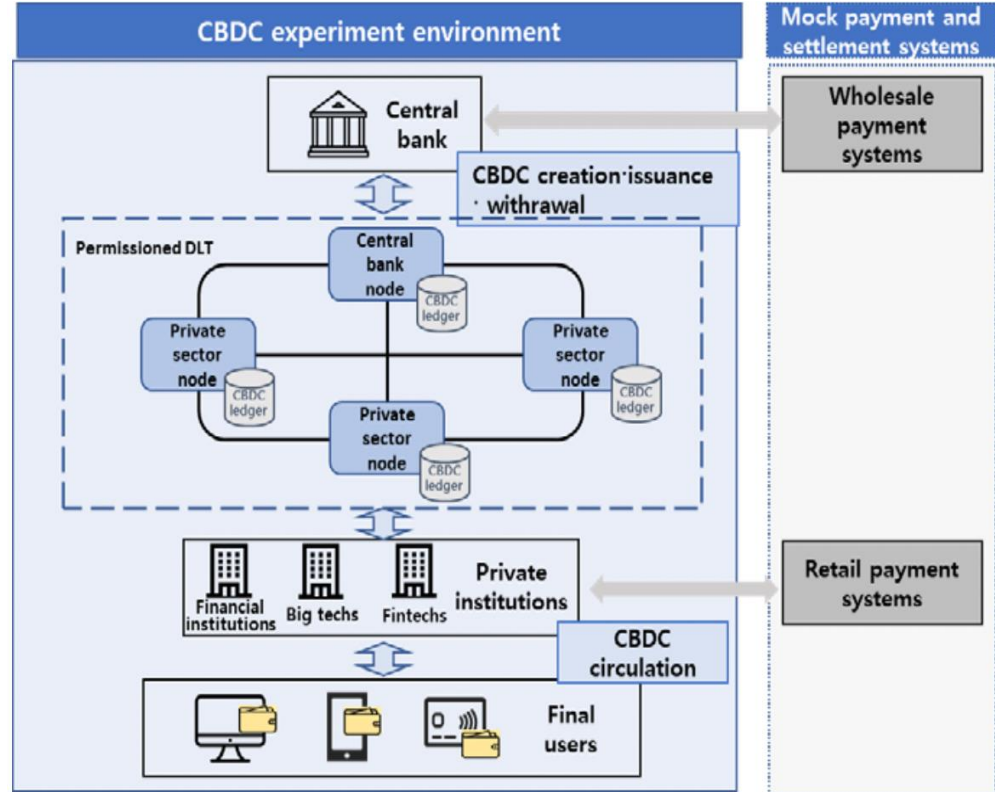
Introduction to Kakao's blockchain platform "Klaytn"

- Features of Kakao's original blockchain platform "Klaytn"
 - On-live for 4+ years (10+ platform release, troubleshooting manual/operating process is established)
 - Private permissioned blockchain, 4,000 Transaction per second
 - Ethereum compatible (Access to many smart contract use cases) and open-source



CBDC Components (1) Overall

- Basic CBDC issuance & redemption function for the central bank
Also, connected to the legacy system
- Basic CBDC distribution for the commercial banks
- Basic interface for fintech (API)



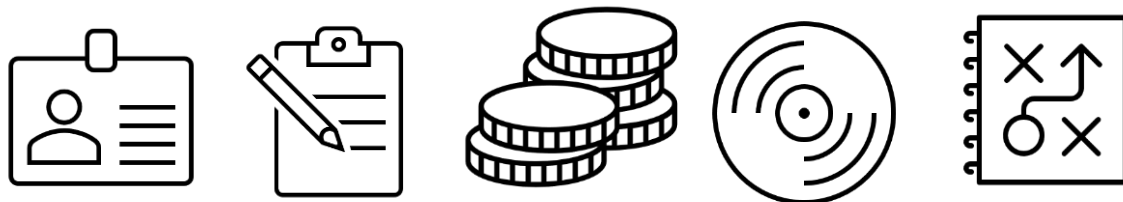
CBDC Components (2) Key management

- Key management is one of the most challenging issue when introducing CBDC to the public
- Tested law enforcement and security enhancement measures using Kakao's key management technology



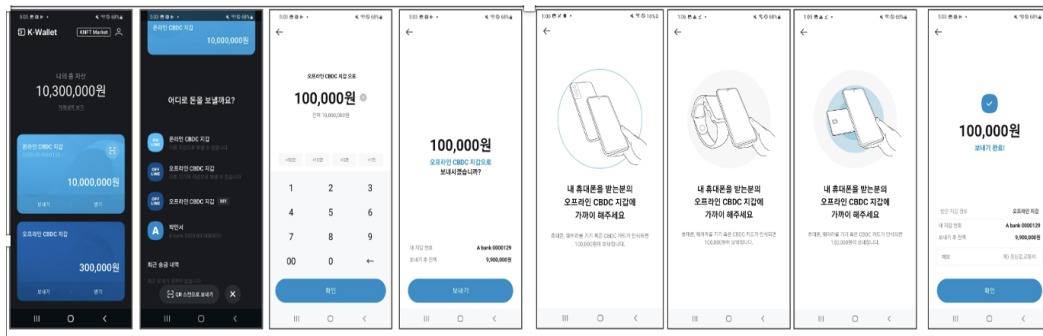
CBDC Components (3) Digital asset transaction

- Almost every financial instruments can be digitalized the future
- Tested transaction between CBDCs and digital assets



CBDC Components (4) Mobile app

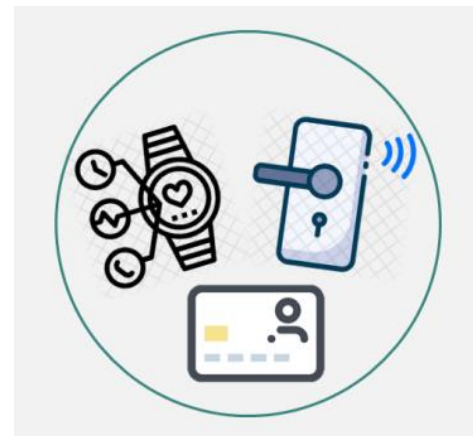
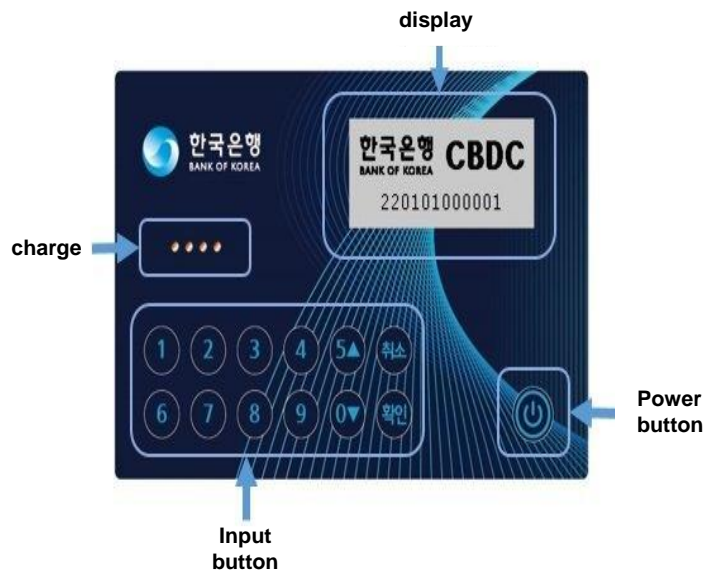
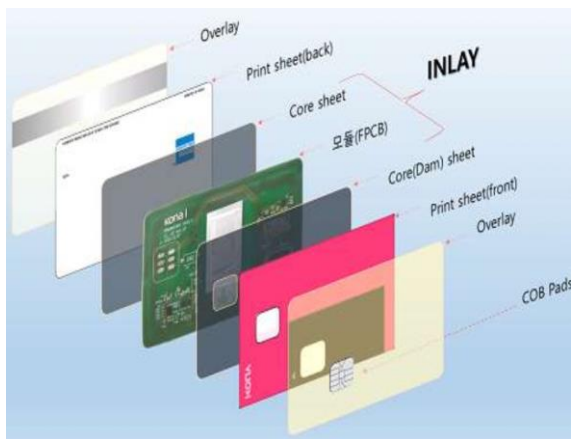
- Adopted Kakao financial firm's user-friendly interface
- Tested from app deployment to transactions



CBDC Components (5) Offline card

- Very important for CBDC design consideration to have cash-like features
- Samsung's cutting-edge security device (Secure element) is used

Test is conducted on various difference devices



CBDC Components (5) Others

No	Functional Requirement	Focus
1	Scalability	Roll ups for more transactions
2	Privacy	Zero Knowledge proof for transaction privacy
3	Smart contracts	Many different test possible to expand the scope of monetary policy(negative interest rates) and financial integrity(limits)
4	Others	Decentralized ID, Cross-border transaction

THANK YOU
