



CBDC AND TECHNOLOGICAL CHALLENGE

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Motivations for Retail CBDC

- Possible threat from global stablecoins (Libra/Diem plan): risk of currency substitution (global)
- Declined cash usage and demand for touchless payment tools : need to provide an alternative safe, low-cost payment tool (e.g., Sweden)
- Lower cost and higher efficiency: compared to the **Fast Payments system** operated by a central banks and banking system (e.g. advanced economies) <**Real time and immediate finality and broader access**>
- Financial inclusion: limited access to bank accounts (e.g. China, Cambodia, emerging economies)
- De-dollarization of domestic currencies: (e.g. Cambodia)
- Geographical factors (e.g. Bahamas)
- Possible threat from Digital Yuan (DCEP) (e.g. advanced economies)



CBDC Key Attributes and Tradeoffs

Source:
Bank of Thailand

	Anonymity	Interest Rate	Programmability	Transaction Cost	Holding, Transfer & Conversion
Key Attributes	 <p>Who can see and trace CBDC transactions?</p>	 <p>Does CBDC have the capacity to earn interest?</p>	 <p>To what degree can businesses deploy smart contracts on CBDC?</p>	 <p>Will users bear costs in making CBDC transactions?</p>	 <p>Should limits be placed on holding, transfer, or conversion amounts?</p>
Tradeoffs	User Privacy	Attractiveness for Users	Innovation	Attractiveness for Users	Attractiveness for Users
	v.s.	v.s.	v.s.	v.s.	v.s.
	Appropriate incentives structure and business model	Banking Intermediation	Security	Revenue	Banking Intermediation
v.s.	v.s.	v.s.		v.s.	
Regulatory Oversight	Monetary Policy Effectiveness	Performance		Monetary Policy Effectiveness	

Low Anonymity

Low/zero rate

?

Free

Ceilings

Retail CBDC

Account-Based

Token-Based 

Blockchain or like

Two-tier system

Internet and/or Offline

	Bahamas (Sand Dollar)	Cambodia (Bakong)
Issuer	Central Bank	Central Bank
Issuing Date	October 2020	October 2020
Legal Tender	Digital version of the Bahamian dollar Yes	Next-Generation Mobile Payments (not CBDC) No
Setting Users' E-wallet	Download from designated financial institutions's homepage	Download from Appple store, etc.
How to obtain tokens	Exchange with Bahama Dollars or Bank Deposits	Exchange with Cambodian Riel or US Dollars or Bank Deposits
Need of identification	No up to the cerntain limitt	No up to the cerntain limitt
Scope	Domestic remittance and transactions	Domestic remittance and transactions
Interst rate	None	None

PBOC: Digital Yuan (DCEP) possibly as legal tender

- Plan to launch before the Winter Olympics in **February 2022** (experimentation since 2020)
- Two-tier system
- Internet and offline (smartphone and card-based)
- Could be used for **cross-border transactions** with collaboration with HK, Thailand, UAE, and BIS
- Zero interest rate

Bank of Japan: Phase 1 Retail Experiment (April 2021 - March 2022) to check the basic functions such as the issuance, distribution and redemption through proof of concept process.

- Both token-based and account based
- Two-tier system