



Central bank digital currencies: Regional and country-specific case studies

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What is CBDC

CBDC

- digital money issued by a central bank and is conceivable in both retail and wholesale form

Retail CBDC

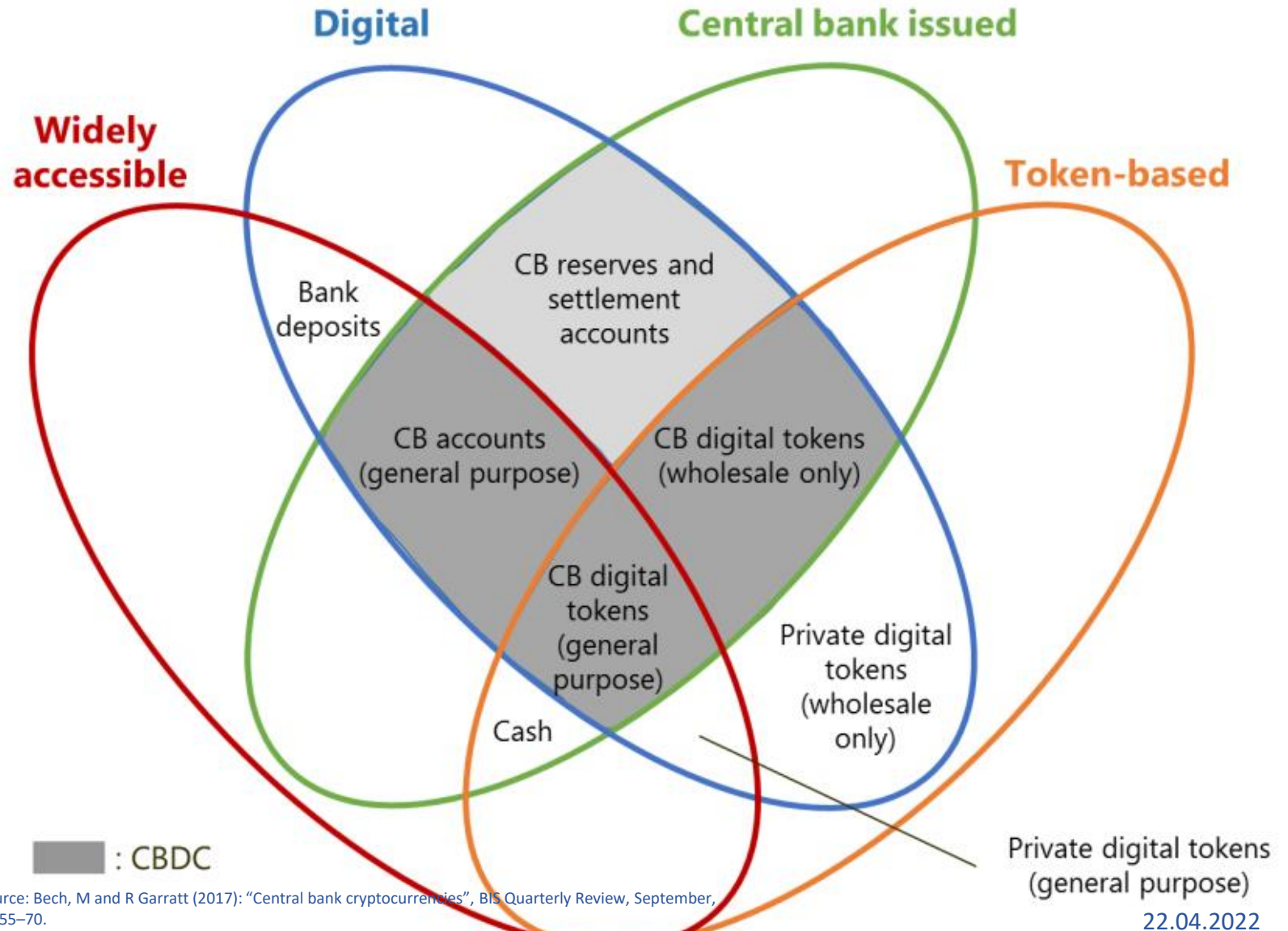
or general purpose CBDC, refers to CBDC that can be held and used by individuals

Wholesale CBDCs

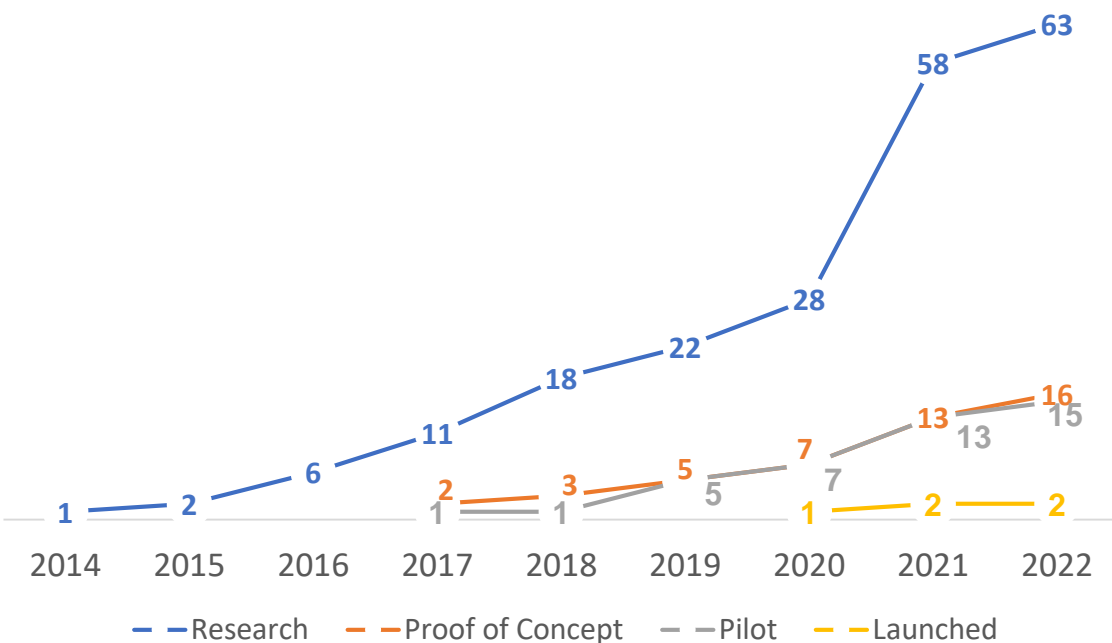
are available only to a selected set of financial institutions.

Source: BIS . 2018. "Central Bank Digital Currencies." Committee on Payments and Market Infrastructure, Basel, Switzerland.

Taxonomy of money



CBDCs trends



Description

Cancelled Countries that cancelled or decommissioned a CBDC.

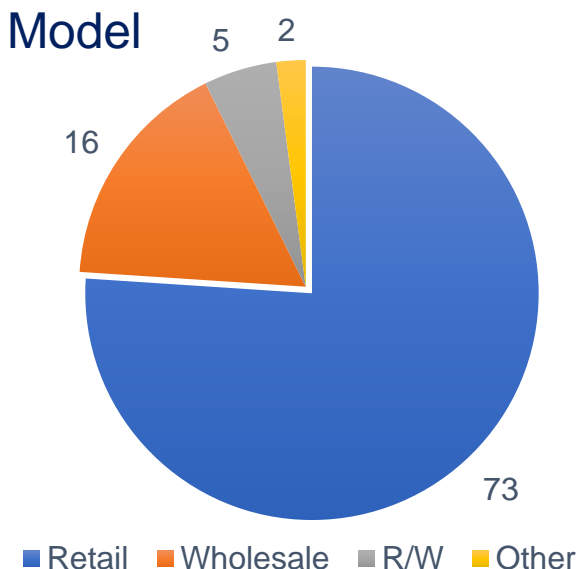
Research Countries that have conducted first explanatory CBDC research.

Proof of Concept Countries that are in an advanced research stage and have published a CBDC proof of concept.

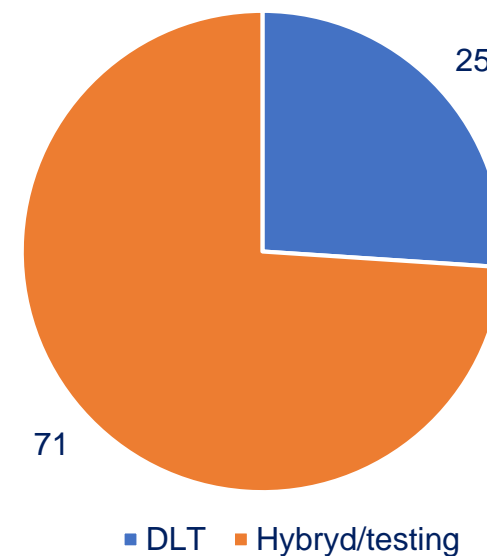
Pilot Countries that have developed a CBDC that is tested in a real environment either with a limited number of parties or on a wide scale.

Launched Countries that officially fully launched a CBDC.

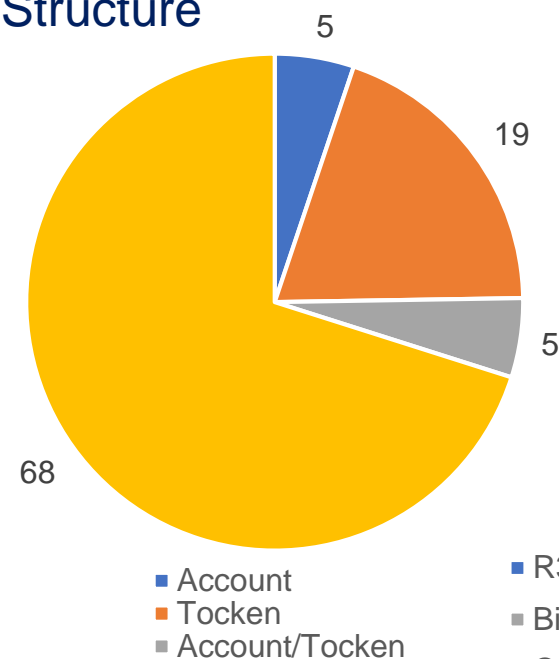
Model



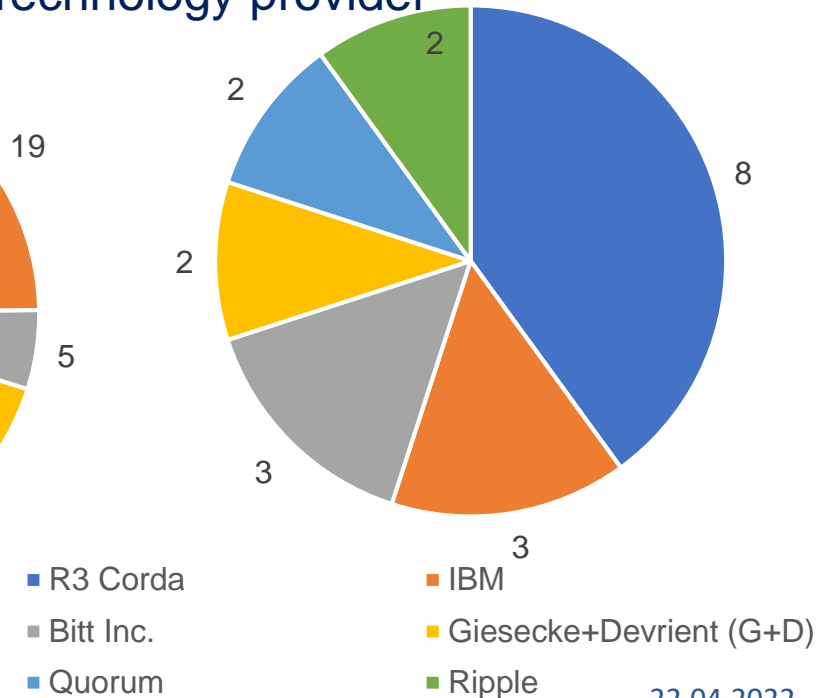
Technology choice



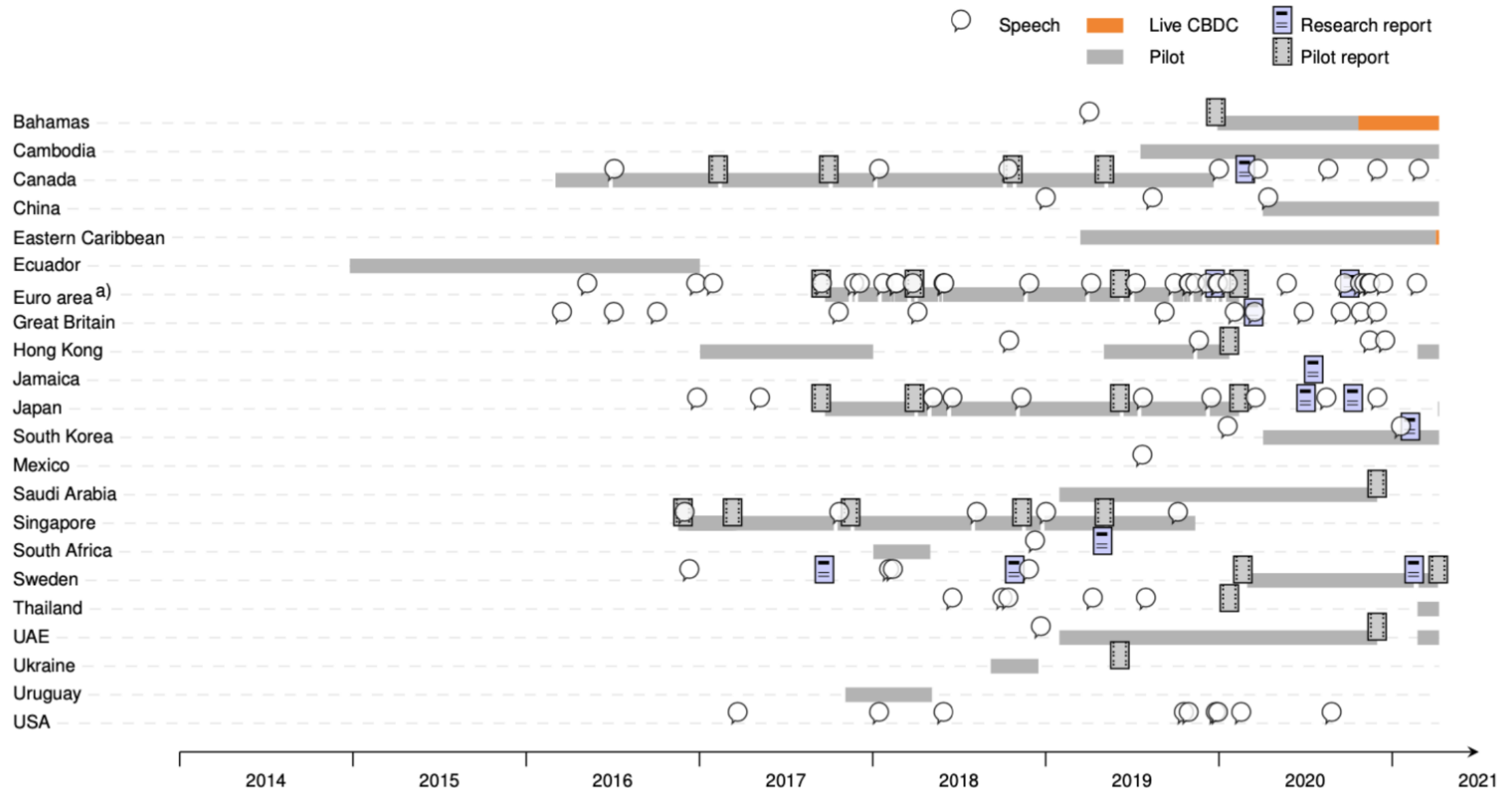
Structure



Technology provider



Timeline of central bank activities on CBDC (retail)



Summary on selected CBDCs

Digital currency	Announcement Year	Status	Retail/Wholesale	Structure	Technology Provider	Technology	DLT / non-DLT
Sand Dollar (Bahamas)	2017	Launched	Retail	Token	NZIA	NZIA Cortex DLT	DLT
e-Naira (Nigeria)	2021	Launched	Retail		Bitt Inc.	Hyperledger Fabric	
e-Peso (Uruguay)	2014	Pilot	Retail	Token	Roberto Giori Company	GSMT	Non-DLT
Jasper (Canada)	2016	Pilot	Wholesale	Account/Token	R3 Corda	R3 Corda	DLT
LionRock, mBridge (HK, Thailand)	2020	Proof of concept	Wholesale	Token	R3 Corda, ConsenSys		DLT
France CBDCr	2016	Pilot	Wholesale	Token	IBM		DLT

Source : based on <https://cbdctracker.org/>, <https://www.atlanticcouncil.org/cbdctracker/>



SANDDOLLAR

Timeline

May 2017 -Research

Retail/Wholesale- Retail
Structure - Account/Token
Technology Provider - NZIA

June 2019 – Pilot

DLT / non-DLT - DLT

October 2020– Launched

Structure - Token

The main goals of the Sand Dollar to modernize and streamline the country's financial system, reduce service delivery costs, increase transactional efficiency and improve financial inclusion.

Key features

- All residents can access the digital wallet through the mobile application or a physical payment card. The records collected during daily operations, such as income and spending information, can support applications for micro-loans.
- The objectives of Sand Dollar are more efficient payments systems with more secure transactions and shorter settlement times, enhanced financial inclusion and wider access, reduced costs, stronger controls around AML, anti-counterfeiting and other illicit activities.
- Private sector payments providers continue to expand the services available for the CBDC use from payment cards to payroll.
- The Central Bank of The Bahamas has not released statistical data on the CBDC use.

Source : based on <https://www.sanddollar.bs/>

Project Giant

Timeline

June 2021 - Research

Retail/Wholesale- Retail
Main motivation/goals - to increase efficiency in cross-border payments

August 2021– Launched

Technology Provider - Bitt Inc.
Technology - Hyperledger Fabric

Key eNaira Statistics

Unified Payment System

Customers can now move money from their bank account to their eNaira wallet with ease.

Sending/Receiving Money

Customers can now send and receive money faster, easily and at very minimal costs.

Verifying Payments

Customers can verify their payments and look up their transaction history anytime, anywhere..

Contactless Payment

Customers can make in-store payment using their eNaira wallet by scanning QR codes.

Key features

Bank Account Management

Customers can monitor their eNaira wallet, check balances and view transaction history.

Peer-to-Peer Payment

Allows users to send money to one another through a linked bank account or card.

Financial Institutions Transactions

Intra/inter financial institutions transactions are not only possible, they are faster and cheaper..

Foreign Exchange Transactions

Customers can enjoy speedy transactions across boundaries and a hitch-free foreign exchange.



~666k

Number of eNaira Speed Wallets created



700k

Number of eNaira Speed Wallet App downloads



35,000+

Total transactions



90%

Of transactions are person to business and business to person



~160

Countries the eNaira Speed Wallet App was downloaded from

Project Ithanon-LionRock, mBridge

Timeline

2021 – renamed

Multiple CBDC Bridge project (mBridge) develop a proof-of-concept prototype to facilitate real-time cross-border foreign exchange payments on distributed ledger technology.

January 2020 – Proof of concept

Retail/Wholesale - Wholesale
Structure -Token
Technology Provider - R3 Corda,ConsenSys
DLT / non-DLT DLT

Key features

- Over 20 private sector participants (including financial institutions, bank associations and an exchange) from the four participating central bank jurisdictions have contributed to use cases tested on the trial platform.
- The pilot phase is set to begin in 2022, mBridge will explore existing limitations of the current platform (e.g. privacy, liquidity management, scalability and performance of DLT), explore policy requirements and trial a CBDC with commercial banks and other market participants.

Source : www.hkma.gov.hk, www.bot.or.th

Project Jasper-Ubin

Timeline

February 2020 – Pilot

February 2017 – Proof of concept

The aim of this initiative is to understand how the use of DLT might deliver greater benefits to interbank payments.

January 2016 - Research

Retail/Wholesale - Wholesale
Structure - Account/Token
Technology Provider - R3 Corda
DLT / non-DLT - DLT

Key features

- The project represents a collaborative effort between Payments Canada, its member financial institutions, the Bank of Canada and other market participants.
- The aim of this initiative is to understand how the use of DLT might deliver greater benefits to interbank payments.

Source : <https://www.bankofcanada.ca/research/digital-currencies-and-fintech/>

Project France CBDC

Timeline

April, June, December 2021 – Pilot

Technology Provider - IBM
To check the Interoperability across platforms

April 2019 - Research

Retail/Wholesale - Wholesale
Structure - Token
Technology Provider - IZNES

June 2016 – Proof of concept

To learn more about DLT with a simple use case.

Key features

- The experiments' objective were to test the case for a wholesale CBDC in several areas.
- Nine different experiments tested the risks/benefits and technical implementations of a wholesale CBDC.
- According to BdF, the results highlight that blockchain and distributed ledger technologies based CBDCs can be effective in accelerating the settlement of security transactions between different currencies, while ensuring the security of exchanges.

Source : www.banque-france.fr



Q&A