



FPC 2023 Spring Member Meeting

March 20 – 21, 2023  Kansas City, MO

Central Bank Digital Currency Initiatives: A Deeper Dive



Central Bank Digital Currency Initiatives: A Deeper Dive



Barry Tooker
Principal
TransactionBanker.com



Mark Dixon
VP, Education
NEACH



Rodman Reef
Managing Principal
Reef Karson Consulting



Peter Tapling
Managing Director
PTap Advisory, LLC

Central Bank Digital Currency Initiatives: A Deeper Dive

- **According to the Atlantic Council***

- In May 2020 35 countries were considering a CBDC

- **As of December 2022**

- 114 countries, representing over 95 percent of global GDP, were exploring a CBDC
- All G7 economies have now moved into the development stage of a CBDC

December 2022



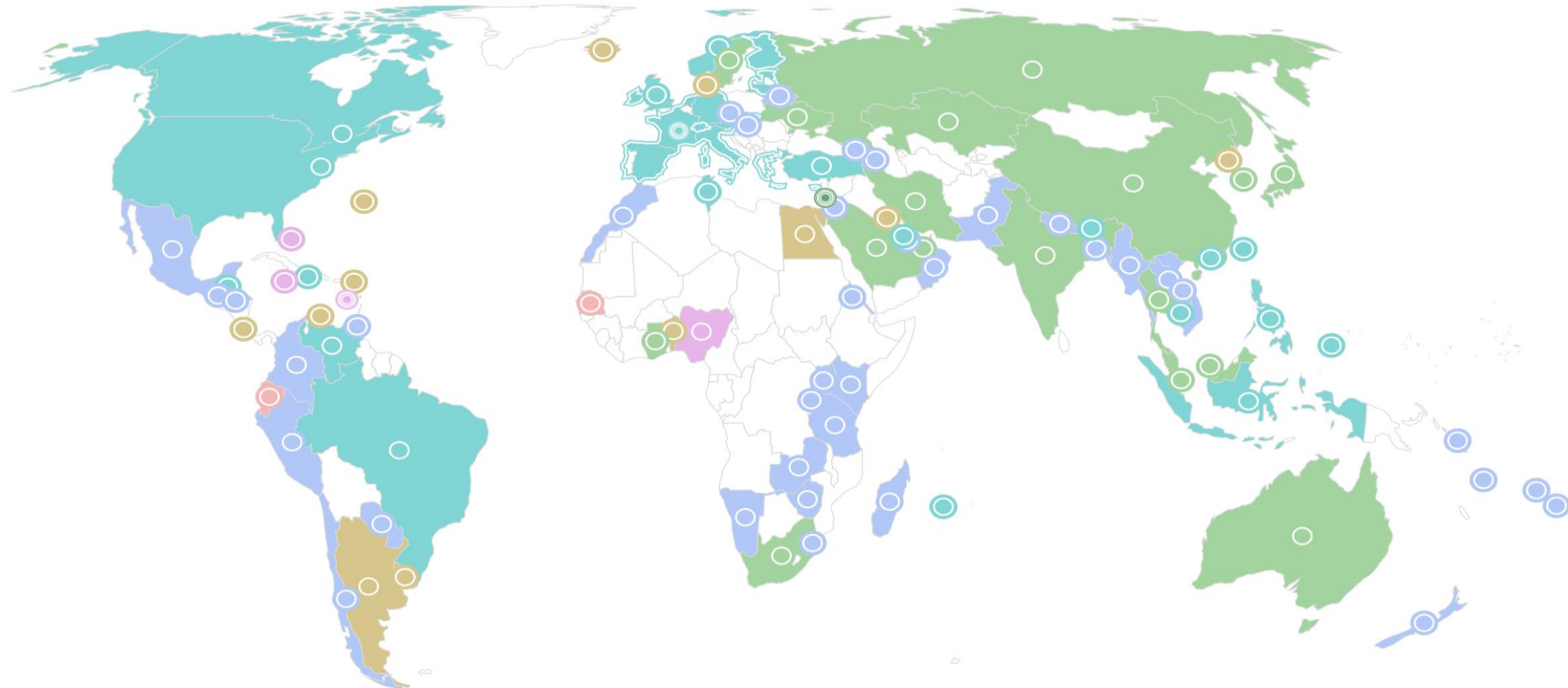
■ Launched ■ Pilot ■ Development ■ Research ■ Inactive ■ Cancelled ■ Other

- **In 2023, over 20 countries will take significant steps towards piloting a CBDC. Australia, Thailand, Brazil, India, South Korea and Russia intend to continue or begin pilot testing**

Central Bank Digital Currency Initiatives: A Deeper Dive

 FPC 2023 Spring
Member Meeting

119 Countries / Currency Unions Tracked	
Status	
11	Launched
18	Pilot
32	Development
39	Research
15	Inactive
2	Canceled



These pilots are being look at differently some are wholesale while others are retail, some are domestically focused while others are cross border. These CBDC pilots can be just central bank to central bank, just among commercial banks and between the central bank and the commercial banks or available to all players including retail customers

March 2023; <https://www.atlanticcouncil.org/blogs/econographics/the-rise-of-central-bank-digital-currencies/>



Central Bank Digital Currency Initiatives: A Deeper Dive



Spanning the Globe

Project	Countries	Objective	Use Case	Status
Aurum*	Hong Kong	To bring to life two very different types of tokens: intermediated CBDC and stablecoins backed by CBDC in the interbank system	Wholesale	Pilot
Cedar**	United States	Demonstrate the potential of blockchain to improve the speed, cost, and access to a critical element of the wholesale cross-border payments market	Wholesale	Development
Hamilton***	United States	Experimented with potential approaches to a digital dollar, with work focused on retail uses and payment channels	Wholesale	Research



*<https://www.bis.org/publ/othp57.pdf>

**<https://www.newyorkfed.org/aboutthefed/nyic/project-cedar>

***<https://www.newyorkfed.org/newsevents/speeches/2022/nea221104>

Central Bank Digital Currency Initiatives: A Deeper Dive



Spanning the Globe

Project	Countries	Objective	Use Case	Status
Jasper*	Canada, Singapore and UK	The project provided significant insights into the relative strengths and weaknesses of using DLT for financial market infrastructures	Wholesale	Pilot
Onyx**	France and Singapore	RTP, liquidity management, efficiency, Multi-cloud/Hybrid-cloud, monitoring and privacy	Wholesale	Research



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

****<https://www.mas.gov.sg/-/media/mas-media-library/development/fintech/onyx-bdfmas-liquidity-management-in-a-multicurrency-corridor-networkv.pdf>

Central Bank Digital Currency Initiatives: A Deeper Dive



FPC 2023 Spring
Member Meeting

Spanning the Globe

Project	Countries	Objective	Use Case	Status
IceBreaker*	Israel, Norway, Sweden and the BIS	Tested the technical feasibility of conducting cross-border and cross-currency transactions in a hub-and-spoke model between different experimental retail CBDC systems.	Retail	Research
mBridge / (Inthanon-LionRock)**	Thailand, China, Hong Kong, UAE and the BIS	Support real-time, peer-to-peer, cross-border payments and foreign exchange transactions using CBDCs and ensure compliance with jurisdiction-specific policy and legal requirements, regulations and governance needs.	Wholesale	Pilot



[*https://www.finextra.com/newsarticle/41913/central-banks-conclude-cross-border-cbdc-experiment-project-icebreaker?utm_medium=newsflash&utm_source=2023-3-6&member=98178](https://www.finextra.com/newsarticle/41913/central-banks-conclude-cross-border-cbdc-experiment-project-icebreaker?utm_medium=newsflash&utm_source=2023-3-6&member=98178)

[*https://www.bis.org/about/bisih/topics/cbdc/mcbdc_bridge.htm](https://www.bis.org/about/bisih/topics/cbdc/mcbdc_bridge.htm)

Central Bank Digital Currency Initiatives: A Deeper Dive



FPC 2023 Spring
Member Meeting

Lessons Learned

- **There is no universal case for CBDCs because each country/economy is different. So central banks need to tailor plans to their specific circumstances**
- **Security and privacy are paramount: Central banks must ensure their digital currency projects are secure and protect user privacy. This includes implementing strong encryption and authentication protocols, as well as ensuring that the system is resilient to cyber-attacks**
- **Cooperation in areas like regulation, interoperability and standard setting. International standard-setting and more knowledge sharing between banks is critical for rapid development and adoption**
- **All banks do the same thing and nobody does it the same way**



Central Bank Digital Currency Initiatives: A Deeper Dive



The More Things Change the More They Stay the Same

Contingency	The BIS* Innovation Hub's Nordic Centre is launching Project Polaris to explore secure and resilient central bank digital currency (CBDC) systems, on- and offline.
Liquidity	In the traditional FIAT world ledgers are reconciled based on debit / credit entries as a result of customer payment instructions (i.e., SWIFT). In a digital asset world, money movement is synonymous to the payment instruction associated with it. In a CBDC world, this movement between participants needs an orchestration of liquidity especially in a multi-tier construct based on a standard set of rules.
Exceptions	The need for the creation of schemes with rules and standards to test multiple conditions, such as exceptions or chargebacks
Local Rules & Regs	Current legislation in some jurisdictions may prevent or restrict the issuance of CBDCs



*<https://www.bis.org/about/bisih/topics/cbdc/polaris.htm>

Central Bank Digital Currency Initiatives: A Deeper Dive



The More Things Change the More They Stay the Same

Clearing & Settlement*	Monetary authorities are researching central bank digital currencies (CBDCs), which could make payment and settlement systems more efficient.
Standards	The lack of coordination on technology and messaging standards in initial stages of development could imply that retrofitting CBDC for cross-border use will be costly and complex
Interoperability	CBDCs need to interface with not only other CBDCs but with other payment systems, private and public blockchains. The global CBDC ecosystem risks becoming fragmented with numerous central banks developing digital currencies based on different technologies, standards and protocols. If left unaddressed, this fragmentation could lead to 'digital islands' springing up across the globe***



*<https://www.mas.gov.sg/schemes-and-initiatives/Project-Ubin> and <https://www.bis.org/about/bisih/topics/cbdc/dunbar.htm>

***<https://www.swift.com/news-events/news/cbdcs-interoperability-5-key-takeaways-our-ground-breaking-experiments>

Central Bank Digital Currency Initiatives: A Deeper Dive Questions