Central Bank Digital Currency (CBDC): An Overview

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The views expressed in this presentation are mine and do not necessarily reflect those of the IMF.
Key questions

1) What’s special about CBDC?
2) What are the key questions raised by the IMF member countries on CBDCs?
3) What are some of the ongoing challenges?
CBDCs: Potential advantages for domestic payments

A spectrum of “cash-like” and “deposit-like” features

24 x 7 hours direct access; offline capacity

Safety and integrity

Greater competition

Integration with markets for tokenized assets

Programmability: an efficient fiscal tool, and for “Internet of Things”

Not just another electronic means of payments but a foundation of the digital economy
CBDCs: Potential advantages for cross border payments

Clean slate; common standards
Shorter transaction chains
Less complex than bilateral correspondent banking relationships
Larger networks, greater competition, and better FX liquidity
Safety and integrity
24 x 7 hours

Cheaper, faster, more transparent & accessible
CBDC exploration -- widespread and increasing

Status of retail CBDC projects, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>No announced research</th>
<th>Research or proof of concept (ongoing or completed)</th>
<th>Pilot CBDC (ongoing or completed)</th>
<th>Live CBDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced economies</td>
<td>36</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Emerging and developing Asia</td>
<td>17</td>
<td>8</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Emerging and developing Europe</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>14</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Middle East and Central Asia</td>
<td>23</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>37</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Sources: Central banks’ websites; Kiffmeister Chronicles; Auer, Cornelli and Frost (2020); CBDC Tracker, Atlantic council and IMF staff calculations
### 4 Categories of questions from IMF member countries -- increasing complexity and novelty

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Design</th>
<th>Pilots</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is CBDC?</td>
<td>How could I build CBDC?</td>
<td>What should I test?</td>
<td>What if I launch CBDC?</td>
</tr>
</tbody>
</table>

#### Uses
- Objectives, solutions, alternatives

#### Effects
- Pros, cons, risks

#### Context
- Country experiences

#### Public-private split
- Roles, innovation

#### Features
- Interest, limits, AML/CFT, data management

#### Regulation and laws
- Integrity, cyber, licensing, legal backing, liability, enforcement

#### Technology
- With policy focus

#### Setup
- Purpose, questions, data gathering

#### Operational capacity
- Central bank, partners, population

#### Communication
- All stakeholders

#### Policy objectives
- Inclusion, efficiency, competition, innovation, principles (G7, others)

#### Policy externalities
- Monetary, financial stability, banking, CFMs, currency subst’n

#### Cross-border uses
- Platforms, interoperability
Emerging consensus on managing policy tradeoffs and synergies

Financial inclusion

Financial stability

Privacy

Financial integrity

Tiered wallets
Most central banks created separate divisions/institutions

Relied on dedicated staff…

<table>
<thead>
<tr>
<th>Central Bank</th>
<th>Number of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Bahamas</td>
<td>15</td>
</tr>
<tr>
<td>Canada</td>
<td>50</td>
</tr>
<tr>
<td>China</td>
<td>300</td>
</tr>
<tr>
<td>Eastern Caribbean</td>
<td>12</td>
</tr>
<tr>
<td>Sweden</td>
<td>20</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0 (10 during pilot)</td>
</tr>
</tbody>
</table>

… and significant number of external consultants & service providers
What are some of the on-going challenges?

- What are the sustainable business models to ensure low cost for both CBDC users and merchants?

- How can the economic value of payments data be realized for financial inclusion (“data as collateral”) while at the same time protecting user privacy?

- How to achieve interoperability among CBDCs across the world? How to connect retail CBDCs in cross-border payments?

- How to incorporate regulatory policies such as capital flow management measures (CFMs) in cross-border use of CBDCs?
Concluding thoughts

➢ CBDC will serve as a foundation of the digital economy and has the potential to allow central banks to better meet their policy objectives
  • Design choices are crucial to realizing the potential of CBDC
  • Emerging consensus on the desirability of “tiered wallets”

➢ Effective public-private partnerships need to be developed to
  • Ensure sustainable business models and optimal adoption
  • Realize the economic value of payments data while protecting privacy

➢ International cooperation is key to interoperable CBDCs
  • Central banks should work closely together from the start
  • Some access controls and limits can be programmed to implement CFMs, with possible trade-off of efficiency