Central bank digital currencies: an opportunity for the monetary system

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CBDCs: putting a big idea into practice
An example of a monetary system with retail CBDC and commercial banks
CBDCs can be designed to have a limited footprint – like cash today.
Challenges arising from the centrality of data in the digital economy

- Competition
- Privacy
- Integrity
Competition and financial inclusion
An open platform can channel network effects towards a virtuous circle
In spite of technological progress and declining information processing costs, card payments are still more expensive than cash for a €25 transaction.
Even in advanced economies, many households did not have bank accounts, payment cards and mobile phones in 2017.
American consumers trust big techs the least to safeguard their personal data

<table>
<thead>
<tr>
<th>High trust</th>
<th>Trust score, 1–7</th>
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<tr>
<td>Big techs</td>
<td>6</td>
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<td>Government agency</td>
<td>5</td>
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<td>Fintechs</td>
<td>4</td>
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<td>Traditional financial institutions</td>
<td>3</td>
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<td>Low trust</td>
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- **Median**
- **Interquartile range**
Identification and privacy in CBDC design
A key design choice: should CBDCs be account-based or token-based?
There is a continuum of governance arrangements for digital ID

Separate private digital ID systems

Government-issued digital ID

Private party

Government
Jigsaw puzzle principle: each provider should have access only to data that are strictly necessary for their task
...and shares only what is needed in a specific case
No provider holds all the pieces of the puzzle; only the individual user does.
CBDC architectures and the financial system
The “direct model” of CBDCs entails a large operational role for the central bank.
Users and merchants have claims on the central bank without an intermediary.
Payment information flows directly from users and merchants to the central bank...
...and the central bank maintains the full ledger of retail transactions
In the “intermediated model”, the central bank has a wholesale ledger of only payments between PSPs, not those between the individual users.
In the “hybrid model”, the central bank retains a copy of the full retail ledger.
Operational involvement of the central bank is highest in the direct model, and lowest in the intermediated model.
The international dimension of CBDC issuance
CBDCs could simplify the monetary architecture and substantially streamline the cross-border payment chain.
Multi-CBDC arrangements can facilitate cross-border payments

**mCBDC Model 3: Integration into a single system**

- Multiple CBDC can be run on a single platform (e.g., mCBDC Bridge or Project Dunbar)
- Central banks mutually recognise ID schemes