CENTRAL BANK DIGITAL CURRENCIES

FEATURES, OPTIONS, PROS AND CONS

Santiago Fernández de Lis
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Executive summary

CBDCs are Central Bank-issued instruments that combine cryptography and DLTs to achieve four possible goals:

1. Improve interbank settlement
2. Digitize cash to improve efficiency in payments
3. Develop a new monetary policy tool to overcome zero-bound interest rates
4. Increase surveillance and reduce financial system instability

Three basic parameters define CBDCs:
- Access
- Anonymity
- Yield

Impacts on financial services might range from improved efficiency to total disruption of financial intermediation

Based on Gouveia, dos Santos, Fernandez de Lis, Neut and Sebastian (2017): Central Bank Digital Currencies: assessing implementation possibilities and impacts, BBVA Research, March 2017
Cash characteristics can now be digitally replicated and modified

**Cash**
- P2P
- Universal
- Anonymous
- Non Yield Bearing

**CBDC**
- P2P
- Universal
- Anonymous
- Non Yield Bearing
- Restricted
- Identified
- Yield Bearing

OR

OR

OR
We select four design options that lead to four main scenarios…

<table>
<thead>
<tr>
<th></th>
<th>CBDC for interbank settlement</th>
<th>CBDC similar to cash</th>
<th>CBDC as new policy tool</th>
<th>CBDC as public deposit in CB</th>
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<td>A</td>
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**A**
Centralized CB ledger is substituted by a distributed ledger to **improve wholesale payments**.

**B**
CBDC **reduces cash management issues** and improves efficiency in payments.

**C**
A yield-bearing CBDC allows CB to **overcome zero-bound interest rates**.

**D**
An identified CBDC **increases surveillance** and reduces financial system instability.
...with different pros, cons and impact

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<th>Issue Addressed</th>
<th>Expected Outcome</th>
<th>Key takeaway</th>
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<td>CBDC for interbank settlement</td>
<td>Efficiency, transparency, resilience and insufficient competition in wholesale payment systems.</td>
<td>Improvement of efficiency in wholesale market. Lower infrastructure management costs for the CB. Reduction of barriers to entry opens participation to third party providers.</td>
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<td>CBDC similar to cash</td>
<td>Cash is costly and burdensome to manage, and private digital currencies are emerging.</td>
<td>Improvement of efficiency in retail payments (P2P). Infrastructure to be provided by CB. Obligation to have an account in the CB. Risk to increase informality and cause deposits and credit to fall.</td>
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<td>CBDC as new policy tool</td>
<td>Lack of flexibility in monetary policies due to the existence of cash (zero-lower bound).</td>
<td>(Same as in Scenario B). Negative interest rates imply capital controls to avoid flight to other assets. Cash is either banned by authorities or abandoned by end-users. Financial repression.</td>
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<td>CBDC as public deposit in CB</td>
<td>Financial instability as a result of banks double role as providers of deposits and credit.</td>
<td>(Same as in Scenario B). A safer currency and higher surveillance lead to more financial stability and lower informality. Credit is extremely reduced unless CB redirects funds to the financial system.</td>
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CONCLUSIONS

CBDCs can be seriously disruptive

- CBDC’s introduction is likely in a 5-year horizon for the less disruptive scenarios (A and B).
- CBs are aware of the serious disruption to the financial system in scenarios B, C and, particularly, D.
- CBs would probably move forward with gradual testing and implementation.
- Increased competition from private DCs (Bitcoin) may lead CBs to move towards CBDCs. First CB movers may increase the incentives for other CBs to follow.
- In the most disruptive scenarios there is a trade-off between greater stability and lower credit throughout the financial system. This could lead to a rise of new credit mechanisms provided by non-bank players (i.e. crowdfunding).
CBDCs: developed countries (DCs) vs Emerging market economies (EMEs)

**A** CBDC for interbank settlement

Technology is available everywhere. Key question: is CBDC a better technology than current payment systems?

Higher probability of adoption where payment system are less efficient (EMEs)?

**B** Anonymous CBDC: similar to cash

EMEs: Interesting tool to increase both financial inclusion and efficiency (including lower currency logistical costs for CBs) ... ... but may consolidate high informality (if credible) or fail (if not credible)

**C** CBDC as new policy tool

Less helpful in EMEs than in DCs: deflation and ZLB constraint are less relevant

**D** Non-anonymous CBDC: public deposit in CB

EMEs: A huge trade off: mechanism to reduce informality with potentially very negative effects on bancarization

**Particular issues in EMEs:** Dollarization, informality, tax evasion and AML
Thanks!

sfernandezdelis@bbva.com