Legal tender and central-bank issued digital currency

PD Dr. Corinne Zellweger-Gutknecht
Overview

- Some initiatives
- Fields of application for base money issued on DLT
- Impacts on the banking system
- Base money’s role as legal tender
- Sovereign money initiative
Some Initiatives

- Ecuador
  - dinero electrónico: 02/2015, up and running, small amounts, centralised network

- Canada
  - MintChip: cancelled in 04/2014, digital representation of the Royal Mint’s coins, on smart cards
  - Central Bank of Canada: 06/2016, project Jasper, CAD-coins for interbank purposes

- Singapore:
  - 03/2017, proof-of-concept trial, Singapore dollar on DLT, for interbank purposes

- China
  - 12/2016, trial completed, DLT-currency for transactions and settlements of bank acceptance bills
  - 09/2016, considerations re issuance of digital legal tender by banks on behalf of PBoC
Some Initiatives

- Bank of England
  - 2015, One Bank Research Agenda; pilot projects
  - 2016, Barrdear/Michael on macroeconomics of CBDC; fintech accelerator
- Netherlands
  - 2015, DNBcoin prototype 1 and 2, completed, for internal test purposes (focused on the blockchain)
  - 2016, DNBcoin prototype 3, announced, for settlement in financial market infrastructures
- Sweden
  - 11/2016, e-Krona
  - 03/2017, project plan; possible start of implementation is not expected before 2019
  - ...

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Fields of application for base money issued on DLT

- **CBDC for interbank purposes** (payment, clearing & settlement)
  - Bank of Canada: CAD-Coin (cf. appendix I)
  - USB, DB, others: USC (utility settlement coin)
  - …

- **CBDC for non-financial households**

- …
Impact on the banking system

Banks might …

1. reduce their excess reserves with the Central Bank;
2. limit their lending;
3. attract alternative funding;
4. turn to the Central bank to cover their funding needs.

## Impact on the banking system

<table>
<thead>
<tr>
<th>1</th>
<th>Central Bank</th>
<th>Commercial Bank</th>
<th>Other Sectors</th>
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Arrows indicate the flow of funds:
- Red arrows: Decrease
- Green arrows: Increase
Impact on the banking system

3
- **Central Bank**
  - ECB refinancing
  - CBDC
  - Bank reserves
  - Equity

4
- **Central Bank**
  - ECB refinancing
  - CBDC
  - Bank reserves
  - Equity

- **Commercial Bank**
  - Loans
  - Deposits
  - ECB refinancing
  - Other assets

- **Other Sectors**
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- **Other Sectors**
  - Loans
  - Deposits
  - CBDC
  - Other liabilities
Base money’s role as legal tender

- **Market forces**: private sector companies
  - E.g. Sweden:
    - 2005: handling of cash in circulation privatised
    - 2016: Riksbank’s proposal to impose legal requirement for the banks’ cash service; e-Krona

- Limitations on payments in notes and coins, established by **States**
  - for public reasons
  - dilution of an essential privilege of legal tender (acceptance by default)

→ CBDC as a potential surrogate for anonymous cash?
Design of CBDC

Limits (credit, debit, transfer)

- E.g. Switzerland:
  - CB’s task to ensure the supply and distribution of cash (art. 5 para. 2 let. b NBA)…
  - … commensurate with the demand for payment transactions (art. 7 para. 1 CPIA).
- Should CB issue cash in order to meet demand for saving purposes too?

Interest

- Could turn a means of payment into a monetary policy tool
- Goes against the joint objective of price stability and nominalism: confidence in a stable currency
Thank you.
1 Participants pledge T1 cash collateral into a special pooled account held by Central Bank
2 Central Bank converts cash collateral to generate CAD-COIN
3 Central Bank transfers CAD-COIN to fund participant’s accounts
4 Identifiable, trusted counterparties exchange assets on the CAD-COIN platform
5 Participants redeem CAD-COIN for T1 cash collateral
6 Central Bank destroys redeemed CAD-COIN

Source: G. Johnson (Bank of Canada)/J. Pilbauer (Payments Canada)/C. Burke (Royal Bank of Canada) via Twitter, K. Klempner, 15.06.2016, https://t.co/eVAwLJdzhv