Central Bank Digital Currency (CBDC)

A first look at design choices

Peter Wierts*, 3rd Annual Delft Blockchain Symposium, 30-01-'20

* The views expressed are those of the presenter and do not necessarily reflect the official policy or position of DNB
Context

- International discussion
  - Mandate for CBDC at ECB
  - NL: frontrunner digital payments

- Discussion in Dutch society
  - WRR (2019): consider CBDC

- DNB study, planned for first half of 2020
  - Objectives, risks, design options
  - Including technology (e.g. programmable money? DLT?)

Sources: CBS and DNB
What is CBDC?

• **Central bank money**
  - Issued by central bank

• Currently in two forms
  - **Cash**: for general public
  - **Reserve accounts**: restricted access (wholesale CBDC), electronic

• **General purpose CBDC would be**
  - Issued by the central bank
  - Digital
  - For general public

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Bron: Bjerg, 2017
Why CBDC? Possible objectives. Which one(s) to choose?

- **Access** to central bank balance sheet: safe digital money
- **Back-up**: for payments in commercial bank money
- **Diversity, innovation** and **privacy** in payments
- Better interoperability: efficient **cross-border payments**
- Digital distribution **cheaper** than physical distribution of cash
- Digital money better **protected** against theft than cash

Digital payments

Cross-border payments

Financial inclusion
Key trade-off

• **CBDC objectives**: require improved **access** to the central bank balance sheet

• This increases the **size** of the central bank balance sheet
  - **Substitution** for bank deposits; larger role in credit intermediation (private function)
  - **Financial stability** risks; especially outside Deposit Guarantee Scheme

• Leads to discussion on design options to create **supply frictions** (e.g. Bindseil, ECB, 2020)
  - How much CBDC would be needed to achieve its objective?
  - Less beneficial conditions for holding larger amounts of CBDC?
For discussion – CBDC objective determines design

• Which technology?
  ➢ Simple payment functions vs programmable money and smart contracts?
  ➢ Distributed Ledger Technology?

• Which access point for customer? Private sector entities and/or central bank app?

• Which level of anonymity?
  ➢ Combine demand for privacy with need for transaction monitoring? (Anti-Money Laundering and Combating the Financing of Terrorism)

• Supply constraints to limit role of central bank in financial system?
  ➢ Who exactly has access to CBDC?
  ➢ Which supply rule?