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# Bachelorarbeit / Masterarbeit

# Mapping Requirements on Central Bank Digital Currencies to Emerging Digital Technologies

With ongoing digitalization, it is also time to look ahead and consider what kind of money and payments will be needed to meet the needs of an increasingly digital economy. We are in the middle of a revolution in payments. Banknotes — central banks' most accessible form of money — are being used less frequently to make payments. At the same time, fintech firms have begun to alter the market by offering new forms of money and new ways to pay with it, and "private money" in form of cryptocurrencies have undoubtedly had tremendous success in the last years.
These developments create major new opportunities, present some new risks, and raise a number of profound questions for central banks. One of the most important questions in this context is whether central banks should issue the safest and most trusted form of money in the economy, also electronically. This digital cash or central bank digital currency (CBDC) could therefore serve as a complement to physical banknotes.
A CBDC could provide households and businesses with a new form of central bank money and a new way to make payments. It could ensure that the public has continued access to a risk-free form of money issued by the central bank, which may be especially important in the future as cash use declines and new forms of privately issued money become more widely used in payments. CBDC could also be designed in a way that contributes to a more resilient, innovative and competitive payment system for both households and businesses.
While CBDC poses a number of opportunities, it raises significant challenges. On the other hand, currently there are many promising emerging digital technologies that might jointly be tackle these issues, in particular, decentralized identity management (SSI) and distributed ledger technologies (DLT, blockchain).

The main goal of this thesis is to explore how such emerging digital technologies can help to tackle the technical, economical, legal, and social challenges involved with the deployment of a CBDC.

Empfohlene Einstiegsliteratur:

- https://www.bankofengland.co.uk/-/media/boe/files/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design.pdf
- Self-Sovereign Identity: Decentralized Digital Identity and Verifiable Credentials. Alex Preukschat and Drummond Reed, Publication in Summer 2020 (estimated), ISBN 9781617296598, Early access possible: https://www.manning.com/books/self-sovereign-identity.
- https://www.bmvi.de/SharedDocs/DE/Anlage/DG/blockchain-gutachten.pdf?__blob=publicationFile

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