Ownership of money in the era of CBDC

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What is CBDC?

- A central bank digital currency (CBDC is a digital currency issued by a central bank, rather than by a commercial bank.
- It is also a liability of the central bank, unless it is dividend-paying, then it is an ownership stake in the central bank, and is a new form of legal tender.
- We can indicate two main models:
- **retail CBDC** - a form of CBDC intended for use by households and firms for everyday transactions). There are two common design formats for CBDCs: token-based and account-based. Each approach has a different technical infrastructure, as well as varying levels of access and privacy,
- **wholesale CBDC** – a form of CBDC intended for use in transactions among bank, central banks, and other financial institutions.

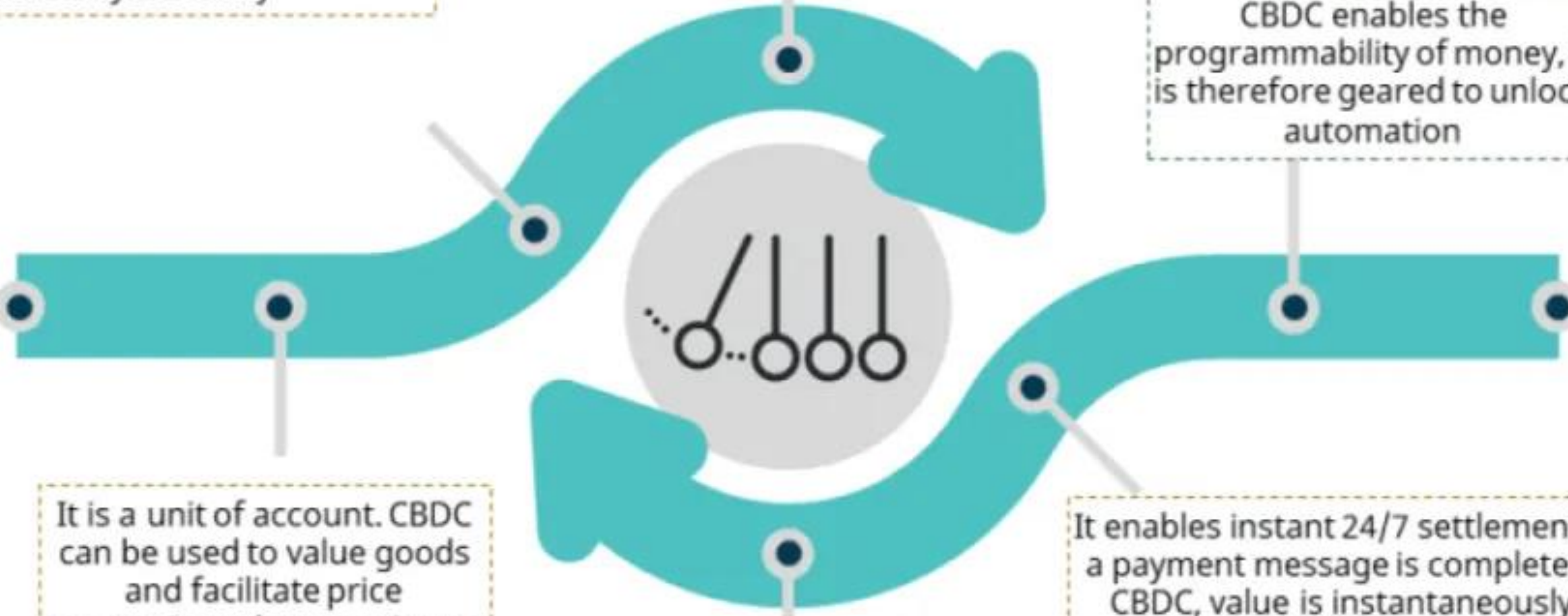
Characteristics of CBDC

It is issued by a central bank. CBDC is a currency that is created and backed, or explicitly regulated, by a national monetary authority

It is electronic. CBDC enables transparency because it is electronic and therefore traceable.

CBDC enables the programmability of money, it is therefore geared to unlock automation

It is a store of value. CBDC can act as a store of value with which to transfer purchasing power from the present day into the future



It enables peer-to-peer transactions. Transactions can be conducted directly between individuals. The digital nature of CBDC adds additional characteristics beyond physical cash

It is a unit of account. CBDC can be used to value goods and facilitate price comparisons between items

It enables instant 24/7 settlement. Once a payment message is completed over CBDC, value is instantaneously and directly transferred

It is fungible. CBDC can be readily exchanged as a payment instrument which enables the facilitation of the interoperability of instruments e.g., enabling mobile money providers to send and receive CBDC from any PSP

Characteristics in cash

Characteristics not in cash

Source : Central-Bank-Digital-Currency-Special-Report isbn. 2022 pdf

Account-based vs token-based CBDC

Account-based CBDC

- The best example of conventional account-based digital currency is funds held in a transaction account at a commercial bank. Ownership of the funds is proven by identity. To spend funds, a person must prove they are the rightful owner of the funds. Some authors characterise this relationship as "I am therefore I own".

Token-based CBDC

- The ownership of the cash is proven by physical possession (the bearer pays). There is no central agent managing transactions of cash, and once a payment has been made with cash it cannot be cancelled or refunded. Auhors define physical token ownership as "I possess therefore I own" and digital token ownership as "I know therefore I own".

Source: Reserve Bank of New Zealand, The Future of Money – Central Bank Digital Currency, September 2021.

Ownership in the era of CBDC

- Ownership is the state or fact of legal possession and control over property, which may be any asset, tangible or intangible. Ownership can involve multiple rights, collectively referred to as title, which may be separated and held by different parties
- The distinction between account-based and token-based money can be summarized by considering the features offered to the end user. One important distinction relates to ownership: the ownership of money held in accounts is proven by identity, whereas the ownership of token-based money is proven by possession.
- CBDC represent a transformative shift in the monetary landscape, challenging traditional notions of money, banking, and ownership.

CBDC means Redefining Ownership

- Traditionally, money held in cash represents direct ownership: the bearer has full control over its use without needing third-party validation. In contrast, money in bank accounts is effectively a claim on the bank's reserves. With CBDCs, the central bank becomes the direct issuer and custodian of money held by the public. This potentially reduces reliance on commercial banks for money storage, thereby redefining the relationship between the individual and the monetary authority. However, it increases the position of the central bank.

How CBDC Disrupt Traditional Ownership?

Main challenges:

1. Custodianship vs. Ownership – CBDC removes intermediaries and grants special role to the central banks.
2. Programmability - allow for the automation of payments and other financial processes based on pre-set rules and conditions.
3. Privacy and Surveillance - privacy implications of a CBDC will depend to a large extent on how it is designed. It can provide a significant level of privacy, but hardly anonymity like cash. An option for privacy is to disable tracking of the smallest transactions.

Ownership challenges of CBDC

- In relation to ownership issues, I see three main challenges:

1. Legal and Ethical Implications - the transition to CBDC must grant that individuals still retain true ownership rights over digital money. It is crucial issue having wide implications for its users.
2. Policy-makers must balance protecting the rights of future users with technological innovations - policymakers must design CBDC that preserve the core rights associated with money ownership while leveraging the advantages of digital currency.
3. CBDC issuance requires clear and transparent criteria for social control and oversight.

Thank you for your attention!

Join us! I currently work on the "International Sanctions Evasion through Central Bank Digital Currencies" research project, which is funded by the Polish National Center (2023/51/D/HS5/02449).

We seek academics interested in finance, central banking, policy and constitutional law. If this is you, let's meet!

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