CBDC functional scope, pricing and controls

by Bindseil, Panetta, Terol

Discussion by Francesca Carapella[1]

Enhancing Digital and Global Infrastructures in Cross-border Payments

Bank of Italy

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[1] The opinions are the author's and do not necessarily reflect those of the Federal Reserve Board or its staff

This paper

Full of (nice) ideas! This discussion focuses on:

$$\left.\begin{array}{ll}\text{1.} & \text{store of value vs medium of exchange} \\ \text{2.} & \text{tiered remuneration}\end{array}\right\} \Rightarrow \text{prevent runs}$$

3. international dimension $\Rightarrow$ improve cross-border payments

Store of value vs medium of exchange

CBDC should be

- not too good of a store of value
  - to avoid bank disintermediation and bank runs
- but a good medium of exchange
  - to add economic value

However, the store of value and medium of exchange functions are fundamentally linked!

Fiat money

Object with no intrinsic value, e.g. US banknotes:

- the store of value function stems from the means of payment function
- money has value tomorrow ONLY because everyone expects to be able to spend it (i.e. that it will be accepted for payment)
- The model of money in Andolfatto (2020) features hoarding of money in equilibrium, which is inefficient
  - fix: taxing money hoarding $\sim$ tiered remuneration

Commodity money

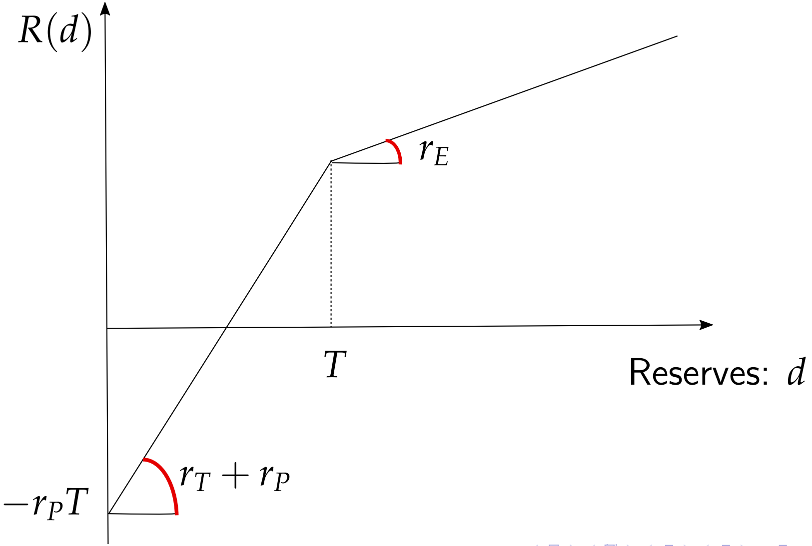
Object with intrinsic value, e.g. gold, Treasuries:

- store of value function stems not only from the ability to use it to pay (e.g. Treasuries in repos) but also from its cash flows
- hence, different media of exchange can be ranked according to
  a. their liquidity properties
  b. their cash flows
- tiered remuneration proposal affects b., so it requires to transform fiat money into commodity money

Tiered remuneration

- 2^{nd} tier remunerated at a less attractive rate than the 1^{st}
- Reminiscent of Voluntary Reserve Targets (VRT) for monetary policy implementation (Baughman-Carapella, JMCB 2020):
  - the threshold for the 1^{st} tier is chosen by each financial institution: the “target”
  - shortages with respect to the target are charged a penalty rate
  - holdings in excess of the target are remunerated at a less attractive rate than those up to the target

Remuneration of reserves in a VRT



Why is a VRT important?

1. no need for the CB to figure out the relevant threshold for each institution
2. the CB can maintain control of money market rates regardless of the level of aggregate CBDC holdings
   - if threshold is too large then the rate at which an institution would lend is the same as that on the 1^{st} tier
   - if threshold is too small then the rate at which an institution would lend is the same as that on the 2^{nd} tier
   - resulting in volatility in money market rates
   - in a VRT an institution would always lend at the same rate as that on the 1^{st} tier
3. CB can learn that funds are flowing into CBDC and possibly out of the financial system before they actually do

International dimension

- a VRT/tiered remuneration scheme can control the cross-border flow of funds
- some big challenges in cross-border payments have been address while others will remain:
  - for outdated settlement technologies, that are not interoperable, the proposed solution: Fintech companies, Nexus prototype by BIS
  - for the cost of holding inventories in order to quote realistic FX rates there is no way around it (unless CBs commit to reciprocal swap lines)