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## Towards a cashless world?

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Various recent studies have explored the possibility of central banks issuing virtual currencies similar to Bitcoin to replace banknotes. Until now it has been technically impossible to create "digital cash" that is exchangeable anonymously among peers and without intermediaries, like banknotes. However, these models are facilitated by blockchain technology, which combines records (blocks) of distributed information and cryptography, allowing direct transactions among peers.

The use of blockchain technology allows certain characteristics of cash to be modified: its circulation can be limited to a confined universe, unlike the universal nature of banknotes; holders can be identified, in contrast with the anonymity of cash; or interest can be paid, as opposed to the fixed nominal value of banknotes.

Existing proposals pursue a number of different objectives: making the wholesale interbank payment system more flexible and faster, replacing cash in whole or in part, thus reducing the costs associated with the informal sector and tax evasion and making certain criminal activities harder to carry out, and increasing the monetary policy authorities' ability to set negative interest rates and reduce the likelihood of banking crises.

There are basically four models of central bank virtual currencies, which roughly correspond to those objectives: for interbank payments, with a restricted, identified, non interest-bearing currency; as a substitute for cash, with a universal, anonymous and non interest-bearing currency; as a tool of monetary policy, retaining anonymity and introducing the payment of interest; and as an alternative to bank deposits, such that he whole population has an identified deposit with the central bank.

It is interesting to note that central bank's analyses have so far focused on the last two options, which are the most disruptive ones. But both pose problems. On the one hand, introducing interest payments increases the monetary policy authorities' ability to react to deflationary situations, but central banks could find the legitimacy of their actions questioned if financial dampening measures are perceived as straying into the area of fiscal policy.

On the other hand, creating deposits with the central bank for the entire population implies a separation between means of payment and the provision of credit, the implications of which for converting savings into investment are far from self-evident. It may increase financial stability, by reducing the likelihood of banking crises, but it is not clear what alternative mechanism would transform the sight deposits into medium- and long-term lending.

The efficiency and cost advantages of the less ambitious models are clear. But the trade-off between benefits and risks of the more ambitious variants is uncertain, which makes it advisable to take a gradual approach, starting with the introduction of a virtual currency for wholesale payments and then taking well controlled steps towards more disruptive variants.



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