Central Bank Digital Currency

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On Monday (19 October) *Money Week* published an editorial calling on the Bank of England to establish a new Bitpound as quickly as possible.[1] Matthew Lynn finished his write-up by saying: "There is a big prize at stake and the U.K. should be trying to win it."

There is every reason to believe that the article will not have been unwelcome to the Bank of England ("**BoE**") since it put out its own proposal for a Central Bank Digital Currency ("**CBDC**") in March of this year.

To the casual reader of news stories, Bitcoin and other cryptocurrencies are probably associated with severe volatility and the risk of loss of value.

The market response to this concern has been the development of so-called stablecoins. Whether, and to what extent, stablecoins will be adopted in the future as a means of payment remains to be seen. Regulators, who were initially enthusiastic about the potential of stablecoins have recently become more concerned about the downside risks. In light of this, policymakers have been focussing on the alternative concept of CBDC—tokenised sovereign money which is made available to the general public for ordinary commercial purposes.

One such currency-concept is "Fedcoin"—a proposal for a payment token with a fixed one-to-one exchange rate with the U.S. dollar. I expect Terence will touch on this so I will just observe that one of the objectives of the proposal is to make tokens available to consumers and fully interchangeable with coins and notes.

A contrasting initiative in central bank-issued payment tokens was the CAD-coin project—a proposal for an intraday issued token to facilitate payments settlement by the Bank of Canada. The token at the heart of this project is a deposit receipt: it gives the holder a

[1] Matthew Lyn, "The Bank of England should create a "Bitpound" digital currency and take the world by storm", *Money Week* (18 October 2020), available at: https://moneyweek.com/investments/alternative-finance/bitcoin/602146/the-bank-of-england-should-create-a-bitpound-digital.

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transferable claim on its value in CBDC money for a short period. It thus falls short of being fully substitutable for coins and notes.

These two proposals may both have centred on the issuance of digital value that can be substituted for sovereign fiat currency but that is where the similarity ends. As one article put it:

> "Fedcoin is intended as a substitute for cash and, as such, it should preserve the privacy attributes of cash (and possibly improve upon them). CAD-coin is intended rather to be a digital marker for cash for a short-term period in a closed, central bank system. It is not intended to translate into the real world and does not need, therefore, to have all the hallmarks of cash." [2]

Given that these two models have been the subject of enthusiastic research and debate in recent years, which one, if any, is gaining traction?

It seems that the ambitious cash-substitute model is in the ascendant.

At the start of this month the European Central Bank ("**ECB**") published a comprehensive report on the possible issuance of a digital euro which, it said, would be an electronic form of central bank money accessible to all citizens and firms—like banknotes, but in a digital form—to make their daily payments in a fast, easy and secure way.[3]

And in its March 2020 Paper the BoE proposed something very similar.[4]

The advantages of CBDCs are often touted and are quite familiar. Arguably, the strongest appeal that this brave new world offers is the chance to be more inclusive where consumers are concerned, allowing the unbanked access to secure funds. But another very strong advantage is that tokenised payments can be made and settled on DLT platforms in real time, eliminating much of the time taken currently for clearing and settlement in the payments system and achieving very considerable efficiencies.

That objective is the much-vaunted holy grail of tokenisation but it leaves almost all the detailed questions about the design and use of CBDCs open. So, what are those questions? I'm going to refer to just three today—those that I regard as the absolutely key, central questions in the design of a new CBDC:

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2 R Garratt, *R3 Reports: CAD-coin versus Fedcoin*, (15 November 2016), available at: https://www.r3.com/wp-content/uploads/2017/06/cadcoin-versus-fedcoin_R3.pdf.

3 ECB, Press Release: ECB Intensifies Its Work on a Digital Euro, (2 October 2020), available at: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr201002~f90bfc94a8.en.html.

4 Bank of England, *Discussion Paper on Central Bank Digital Currency: opportunities, challenges and design, (*14 October 2020); available at https://www.bankofengland.co.uk/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design-discussion-paper.

1. **Is this intended to be available just for payments infrastructure or for commercial and retail applications or for both?**

CAD-coin is the definitive infrastructural project. Significant benefits can still be achieved simply by converting payments settlement systems into digital representations of money for intraday payments clearing and settlement. If this is the choice, then the other two questions are largely redundant because the currency cannot have any value or impact in the real economy. On the other hand, there may be value in issuing a token to retail consumers which is not intended to be used at all in infrastructure, in order to maintain separate platforms for security purposes and avoid contamination.

2. **Is it intended to have an impact on overall money supply?**

If a central bank issues new money in addition to issuing coins and bank notes at the traditional volumes, it will increase money supply. This could be part of a plan of monetary loosening, if managed gradually and that plan would come with the significant advantage of needing no exchange mechanism between notes and tokens. But if there is no intention to increase money supply, then there must be a mechanism for taking notes out of the economy when coins are issued.

3. **Is it intended to impact on the balance between central banks and commercial banks in the supply of money?**

Notes and deposits in reserve accounts are a claim on the central bank but debits are claim on commercial banks. The fact that cash is falling into disuse has had an impact on central banks' ability to influence money supply and, ultimately, the economy overall. A token issued by the central bank directly to consumers would shift the balance of influence back again because it would be a claim on the central bank rather than a debit or credit claim against a commercial bank. A central bank which wished to avoid this result but still wanted the CBDC to have value in the real economy would issue the currency exclusively to commercial banks via so-called "reserve wallets" as an alternative to bank deposits, but the currency would only be transmissible in intra-bank transactions and would not be intended to have a retail application, meaning that ordinary consumers would still be dealing in commercial bank money most of the time.

It would seem that the preferred answers to these questions in the current thinking of key central banks are Yes, No and Yes respectively. In reaching for these answers, central banks—including the BoE—are enthusiastically endorsing the boldest vision for CBDCs.

But interestingly, although the BoE is proposing to issue a currency for use in retail payments, it is not proposing to use the same currency in payments infrastructure. This is probably wise, not least because a digital currency representing fiat currency will come with its own difficult legal questions about whether or not it is a negotiable instrument and whether mere possession confers good title. While these questions are swirling around, lost or stolen tokens could represent an existential threat to a payments settlement system. Thus there is considerable room for cross-contamination problems of legal risk to arise in a system which bridges the retail and the infrastructural spaces.

Should we welcome this bold vision? I think, broadly, we must. The world today is less certain than it was yesterday. Sovereign tokenisation offers central banks a new tool in the bid to control money supply but it also offers incremental gains in market efficiency and a new weapon in the fight for financial inclusion. That seems to me to be a winning combination.