

# Digital currency can impact monetary policy

But the economic effects of blockchain and other digital money developed by central banks are in stark contrast to that of private cryptocurrencies. **BY EMIR HRNJIC**

**T**HE People's Bank of China (PBOC) has reportedly begun a pilot test of the digital yuan in April, thus becoming the first major economy to introduce a central bank digital currency (CBDC). The experimental trials started in three cities – Shenzhen, Suzhou and Chengdu – as well as in the Xiong'an New Area, and digital yuan has become part of the monetary system.

Together with President Xi Jinping's recent appeal for greater urgency in the development of blockchain, the pilot launch of digital yuan epitomises China's ambition to become the digital currency leader. Moreover, state-media outlet *China Daily* claimed that "digital currency provides a functional alternative to the dollar settlement system".

While China is the only major economy that has made a daring step towards a major milestone, governments and central banks around the world have been experimenting with blockchain and digital currencies for years. The early versions of the US stimulus bill included the development of a digital US dollar, while the European Central Bank recently released a working paper analysing the merits of its potential digital currency.

Indeed, as central bankers around the world are increasingly showing interest in blockchain technologies and the global adoption of digital currencies continues, electronic money could eventually challenge and partially replace fiat currencies, thus creating significant monetary policy implications.

As a recent report of a G-7 working group on a subset of digital currencies known as stablecoins noted, "stablecoins that reach global scale could pose challenges and risks to monetary policy".

CBDC would likely help monetary policy targeting money supply and enable access to real-time data regarding money demand. It would also likely be a direct liability of the central bank, while blockchain-based interbank settlement systems would be faster, auditable, and more transparent.

In general, central banks influence monetary policy by changing the short-term interest rate. Additionally, monetary authorities reduce long-term interest rates by buying long-term government bonds. This process, also known as quantitative easing, increases the money supply.

## CENTRAL BANK DIGITAL CURRENCIES

CBDC could help with targeting of money supply since citizens would have direct access to the central bank's base money. It would also enable governments' access to real-time data on money demand.

Indeed, a recent research study by the Bank of England concluded that a central bank digital currency might "strengthen the transmission of monetary policy changes to the real economy".

Bitcoin supporters glorify its fixed issuance schedule with no discretionary influence of central banks or any other institution. They often present past evidence of central banks in several countries abusing their discretionary power and printing money for the benefit of various interest groups.

In the case of CBDC, the central bank's commitment problem could be potentially solved by using smart contracts to predetermine the issuance rate of the currency when predefined conditions are met.

However, the pre-determined currency issuance implies that money supply would by default ignore future market factors and hence the



Bitcoin supporters glorify its fixed issuance schedule with no discretionary influence of central banks or any other institution. PHOTO: BLOOMBERG

future quantity of money would not be able to respond to future market conditions.

## PRIVATE CRYPTOCURRENCIES

When Facebook and its partners in Libra Association announced the development of a cryptocurrency with a potential user base of 2.4 billion active users last June, the possibility of a private cryptocurrency replacing sovereign currency became a reality.

At the Congress hearing organised a few weeks later, Facebook executive David Marcus stated that the Libra Association has "no intention of competing with any sovereign currencies or entering the monetary policy arena". However, if Libra becomes a widely adopted private currency as its founders hope, it will inevitably have monetary policy implications regardless of the founders' intentions.

Libra will be fully backed by the basket of currencies comprising the US dollar, euro, Japanese yen, pound sterling and Singapore dollar, and thus it will effectively follow the monetary policies of the five central banks that issue these currencies. As regulators around the world voiced concerns that Libra could interfere with their national currencies and monetary policies, Libra was recently redesigned, and a new White Paper describes single-currency stablecoins separate from the Libra coin.

Notwithstanding these changes, Libra could eventually partially replace some sovereign currencies, especially in countries with high inflation and an unstable banking system. According to Bank for International Settlements' (BIS) report, private cryptocurrencies backed by tech giants could "rapidly establish a dominant position in global finance and pose a potential threat to competition, stability and social welfare".

Furthermore, the potential dominance of Libra or any other private cryptocurrency in a specific country would severely undermine the effects of monetary policy of that country and jeopardise its economy. If citizens start using cryptocurrency rather than local currency, weak demand would cause the local currency's depreciation. As inflation of local currency increases, it will affect even non-adopters of the cryptocurrency.

In this respect, the effect of cryptocurrencies would be analogous to dollarisation – the impact of the US dollar on local currencies in some developing countries. For example, demand for local currencies in countries such as Zimbabwe or Cambodia is affected by lack of trust in the local currency, with locals using the US dollar as a medium of exchange. This currency substitution causes local monetary authorities to lose a set of monetary policy tools that can affect macroeconomic outcomes.

On the other hand, libertarians and free market devotees claim that competition from private currencies may impose market discipline on central banks, which should improve the quality of sovereign money. Currency competition, they argue, can reduce inflation and prevent the central bank's manipulation of interest rates.

Moreover, monetary policy typically affects the real economy via central banks' short-term interest rate, which has an impact on the bank funding cost and thus bank lending rates. This monetary policy pass-through is limited by the relatively strong market power that banks have over depositors. In layman's terms, deposit rates are not very responsive to policy rate changes.

However, an improved blockchain-based payment system would likely increase competition and, as a result, competitive pressures on the depository system would increase the responsiveness of deposit rates to policy rates.

As global adoption of cryptocurrencies continues to accelerate, policymakers expect that they will challenge and even partially replace fiat currencies in future. Central banks' digital currencies are likely to strengthen the transmission of monetary policy and help monetary policy targeting money supply.

Dominant private cryptocurrencies, on the other hand, would severely undermine the effect of monetary policy. Furthermore, they could also lead to diminishing relevance of some sovereign currencies, the loss of their value, and high inflation.

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