Central Bank Digital Currency – Frequently Asked Questions

Many day-to-day transactions in the U.S. financial system are now digital, conducted with clicks and swipes rather than paper cash. But central bank digital currency (CBDC), a policy proposal under consideration by many central banks around the world, would take the concept of digital money a step further by establishing a new form of currency reliant on reserves and deposits maintained by a central bank.

Proponents often argue that a CBDC could potentially provide better access to banking and a simpler all-around payment system, but many of those benefits come with costs. While there are some benefits, our analysis indicates that a U.S. CBDC would diminish the fractional reserve system in the United States, possibly reducing credit availability, and would have substantial implications on the broader U.S. economy and the ability to conduct monetary policy. While many complex policy questions remain unanswered, we seek to answer some of the basic CBDC questions below and through our latest research.

What is a CBDC, and how is it different than Apple Pay or other forms of digital payments?

A CBDC is a form of digital payment issued by a central bank and denominated in the national unit of account, such as a dollar. It's different from Apple Pay, credit cards or other types of "digital money" because rather than serving as a link to a private account, it is a direct liability held at the central bank. That means for every CBDC that is issued, the central bank must maintain an equal number of reserves and deposits.

Would a CBDC rely on blockchain or a similar architecture?

While the proposal is still in its infancy, a CBDC could either be account-based or token-based.

- **Account-based:** Verifiable based on the identity of the owner. This would be similar to existing bank accounts and would require an intermediary.

- **Token-based.** This structure would be self-authenticating and would be accessible through a public- and private-key cryptography scheme. This would enable anonymous transactions but would also undermine the existing anti-money laundering, combating the financing of terrorism and sanctions regime, and increase risks and costs associated with fraud.

There would also need to be a determination on whether to leverage a direct or indirect model and whether the CBDC would be eligible to earn interest:

- **Direct model**. The central bank would work directly with customers by issuing wallets and handle all the payment services. The direct model would give the government a full view of every customer's transaction history and require a massive fleet of new workers to review transactions for fraud, handle mobile banking services and otherwise fill the role of a bank. It's mostly considered an unworkable option.

- **Indirect model**. Customers hold their CBDC at banks and this would require banks to act as a CBDC intermediary. That role would differ starkly from the role banks play today as financial intermediaries, and the difference would impose new costs on the economy.

How would a CBDC affect the existing banking system?

Banks would not be able to lend out CBDC deposits, which would disrupt the core of their business model that allows families and businesses access to low-cost funding. That disruption would raise borrowing costs, render banks unable to plan for the future and stifle economic growth. Overall, a CBDC would shift money out of bank deposits and into cash. The government could take steps to minimize the consequences of that shift, but such a system would give the government – not the private sector – the ability to determine the cost of credit by controlling the availability of deposits.

What are other countries doing with CBDC?

China is currently working to launch a digital yuan, which will grant the Chinese Politburo a new layer of visibility into citizens' financial transactions. The first CBDC launched worldwide was The Bahamas' "Sand Dollar" earlier this year. The

European Union and the U.K. are also exploring options.

Should overseas efforts to adopt a CBDC encourage greater expediency in the U.S.?

No. Federal Reserve Chair Jay Powell rightfully noted in a recent speech that the U.S. doesn't need to be first in a CBDC race because of "our rule of law, our democratic institutions, … our economy, our industrious people, and all the things that make the United States the United States." The greater worry should be regarding the use of CBDCs overseas to evade U.S. sanctions.

Does the Federal Reserve have the authority to issue a digital currency?

Chair Powell has remarked that that issuing a CBDC would likely require legislation. Additionally, BPI analysis affirms that opinion that the Federal Reserve does not appear to have the legal authority to issue a CBDC without congressional authorization, and any authority it did have would need Treasury Department agreement. If it did issue a CBDC, the Fed would not have the authority to hold accounts for customers or pay interest on CBDC.

How would a CBDC affect the Fed's responsibilities of controlling the money supply and setting interest rates?

It would make the Fed, and its role as a rescuer in the markets, much bigger.

For example, a CBDC would prompt the Fed to expand its already-large balance sheet even further to prepare for decreases in reserve balances (banks' deposits at the Fed). It could also destabilize markets by causing flights to quality in times of stress, when consumers could rush to convert investments to CBDC. March 2020 – when many investors sold safe Treasuries in favor of cash – illustrates a cautionary tale about such incidents. During those flights to haven assets, the Fed may have to act as a rescuer, buying the unwanted riskier assets such as corporate bonds or commercial paper.

There's a major benefit: an interest-bearing CBDC would allow the Fed to set nominal interest rates as negative as necessary to stimulate the economy when needed. That would eliminate the Fed's "zero lower bound" on monetary policy, which limits its power to soothe a weak economy. But that benefit would require paper currency to be eliminated. And it's not clear that the Fed has the legal authority to pay interest on CBDC.

Where are U.S. policymakers now, and what are the next steps?

The Federal Reserve Bank of Boston is conducting research with MIT on CBDC and plans to release a report in summer 2021.

Where can I learn more?

For a deeper look, visit BPI's latest research:

- Central Bank Digital Currencies: Costs, Benefits and Major Implications for the U.S. Economic System
- The Benefits and Costs of a Central Bank Digital Currency for Monetary Policy
- The Dollar, the Yuan, and CBDCs: What Talks, What Walks
- Legal Authority to Issue a U.S. Central Bank Digital Currency