



Submission to the  
US Federal Reserve

Comments on  
Central Bank Digital Currency

19 MAY 2022

## **Money and Payments: The U.S. Dollar in the Age of Digital Transformation**

The design and development of central bank digital currencies (CBDCs), as the Board identifies, provides an opportunity to innovate on payments and money, an opportunity perhaps comparable to the monetary conference at Bretton Woods, almost 80 years ago. We commend the Board for taking this bold step, for sharing its thoughts and seeking feedback.

The Emerging Payments Association Asia is the major policy group concerned with payments in Asia. We represent several private organisations and the payments community of the region.

Our opinion would be useful to the Board, for the US is and will be increasingly engaged in the region, the US dollar is not just a local currency as the Board recognises. What the US does will certainly influence other countries in our region to respond in a way that positively or negatively enhances a US CBDC.

We have published a position paper on CBDCs for regulators, and provide the same attached.

## **1. What additional potential benefits, policy considerations, or risks of a CBDC may exist that have not been raised in this paper?**

The Board has rightly identified several policy considerations and risks. In our ***EPAA Position Paper No. 1: CBDC*** we supplement these. One of the big risks, posed even without CBDCs, is the disruption of the money system. A lack of confidence, accessibility, and convenience of the money system can create rival systems, or worse negatively impact the free-flow globalisation of commerce we have today

In addition, the Board should consider a US CBDC, like the US dollar, as core to an international money system. This means integration with other CBDC/money systems, and at some level, acceptance of alternate systems and users. Exclusion of participants on political grounds is problematic, and it is important to remember the architecture of the current system in the aftermath of two world wars. It was not possible for any government to control who could hold and exchange their paper notes, and it is perhaps wise to draw the conclusion, that the mutual support provided through those policies has led to global commercial integration, development (through the IMF and World Bank) and more importantly, the relative peace that we have enjoyed for 80 years.

The implication of our suggestion is that the US should seek to consider an International CBDC system that would allow emerging powers to accept and play on the same field, and obtain a security of their deposits. At a minimum this may be international CBDC integration.

With retail CBDCs it may be possible to centrally issue what is today private money. This may improve financial institution lending regulation, but at the same time reduce the potency of private banks that have supported economic growth across the globe.

Finally, the innovation potential of a CBDC is too numerous to enumerate here, we have some in our attached position paper. Central banks should seek to architect a CBDC system so that it could, if desired, expand into different innovative areas, accepting a risk of trial and error.

## **2. Could some or all of the potential benefits of a CBDC be better achieved in a different way?**

In its simplest form CBDC is an extension of electronic money, and by itself electronic money is evolving to be similar to digital currencies. Popular blockchain is decentralised in nature, so a centralised CBDC may not benefit from an open ledger, as much as a cryptocurrency does. Consideration should be given to high availability, and particularly offline transactions.

### **3. Could a CBDC affect financial inclusion? Would the net effect be positive or negative for inclusion?**

Clearly a CBDC could impact financial inclusion depending on implementation. There is a move to better identity of account holders. Non-legal entities, and people seeking to receive payments without the knowledge of authorities may seek alternative payment systems. Maintaining paper cash could solve the problem in the short term, but the decline of cash may wedge this population out of the system. While this may seem like a desired outcome, without social policies to resolve (for example) illegal immigration, tax avoidance and money laundering, an alternate network may emerge.

On the other hand, CBDCs could positively impact financial wellbeing for the disadvantaged population.

It is worth reflecting on the US Declaration of Independence, and the founders desire to eliminate tyranny by design. Indeed, many of the problems that gave rise to independence was to do with greater government visibility and intercession of transactions (e.g. stamp duty and taxes). A CBDC, poorly designed, could increase central control, and result in greater inconvenience. This is not to discourage a US CBDC, for CBDCs are inevitable. This is to encourage a well-designed system with decentralised checks and balances.

#### **4. How might a U.S. CBDC affect the Federal Reserve's ability to effectively implement monetary policy in the pursuit of its maximum-employment and price-stability goals?**

A centrally controlled CBDC can enhance the Federal Reserve's ability to implement monetary policy, especially when interest rates are low, and that lever has reached implicit limits. Examples include CBDC sub-accounting, or CBDC labelled for different purposes (food, health, accommodation or investment) with expiry to assist an economy recover where it is required – immediate employment, without impacting longer term inflation. A CBDC can still be used to control monetary policy in the traditional way, and increasingly it can be used to implement fiscal policy.

## **5. How could a CBDC affect financial stability? Would the net effect be positive or negative for stability?**

Financial stability is founded on the market knowing what will come next. Intrinsically a CBDC gives greater control to the issuer, so this adds a level of uncertainty to the market introducing a possibility of instability. Greater monetary control that CBDCs offer can counteract existing risks in the current money system, however, as before, stability is based on the perception and confidence in the government and regulator in seeking to maintain a stable financial system.

However, it should be noted that now more than before, there is a risk that external system influences financial markets more in the future, so a robust and well adopted CBDC system that seeks to provide greater benefit than alternatives, if properly governed, would net increase market stability.

## **6. Could a CBDC adversely affect the financial sector? How might a CBDC affect the financial sector differently from stablecoins or other nonbank money?**

A CBDC in its simplest form as a wholesale Federal Reserve balance can do little harm. If it were a retail currency, and if it encompassed private bank issues money, the risks of the currency impacting the sector increase. If the Federal system takes on more deposit and lending activity from private banks, this will at least impact those institutions directly. Hypothetically if the CBDC was decentralized, or existed independently from centralized systems, say as a signed or hashed cryptogram, and that system were to be hacked by a quantum computer, hypothetically, this could adversely affect the financial sector if there were no mitigants. In the design of a CBDC, care should be taken so that adverse effects are minimised, even if risks materialise.

## 7. What tools could be considered to mitigate any adverse impact of CBDC on the financial sector? Would some of these tools diminish the potential benefits of a CBDC?

We list a few mitigants:

Potential mitigant	Diminished benefits
Wholesale CBDC only	No retail <u>benefit</u> . Questionable business case for CBDCs
Centralised online ledger	Does not work offline, risk of central outage
Non-integration with other digital currencies	May result in a superior non-US CBDC solution, diminished value of the US dollar
Continue cash	Limited benefits of ubiquitous CBDCs
Quantum-proof design	We have learned that no system is immune to security threats
Anonymous CBDCs	Problems associated with cash continue (money laundering, terrorism financing, etc)
KYC identification of holder	Does not support anonymous payments – could allow a secondary system to emerge to support illegal payments
Implement a like-for-like CBDC system to replace existing	Reduces innovation

**8. If cash usage declines, is it important to preserve the general public's access to a form of central bank money that can be used widely for payments?**

Electronic payments today exist largely as promises-to-pay between private institutions, and for the general public there is little or no concern of systemic risk for payments. The big risk for consumers is that their savings remain intact, and they can always access it to make a payment. This guarantee from the government, whether written on a paper note or guaranteed in law is perhaps equivalent.

## **9. How might domestic and cross-border digital payments evolve in the absence of a U.S. CBDC?**

Despite its popularity Bitcoin and other cryptocurrencies have failed to replace traditional means of payment: local or cross border. The work done by the Financial Stability Board (FSB) looks positive in improving cross border payments. US CBDCs will nevertheless need to interact with other CBDCs, either through existing payment rails or new ones, so the introduction of a US CBDC will do little. If the Know-Your-Customer problem (KYC) is handled by governments through nationalised but decentralised digital identity systems, through payments between individual retail international CBDC accounts, and cross border payments are checked by regulators at the border, this will remove a major headache and source of regulatory (and through the threat of fines, private institution) stress. It could create a global walled garden where people could freely exchange money, institutions did not need to screen, individuals could maintain some privacy, and national systems ensured individuals are legitimate, and money transfers are tracked for tax, and policing purposes.

Without CBDCs the task is possible, but more difficult as KYC continues to be handled by private institutions, as it is today.

## **10. How should decisions by other large economy nations to issue CBDCs influence the decision whether the United States should do so?**

CBDCs are in an early stage of experimentation, so some domestic diversity of implementation may be recommended. If it proves successful, it is imperative that interoperability be given some thought, to enable a few use cases:

- Cross border institutional payments
- Cross border retail payments
- Central bank currency reserve integration
- Domestic payments and savings utilising alternate digital currencies and assets
- An international CBDC/currency, e.g. Bancor potentially for retail not just sovereign settlement

## **11. Are there additional ways to manage potential risks associated with CBDC that were not raised in this paper?**

The biggest risk is during an experimentation phase. Smaller geographies such as smaller countries, smaller states or localities should be allowed to experiment to find suitable facets of CBDCs that can be consumed for broad adoption.

Consideration should be given to an overarching decentralized digital currency framework, with US CBDCs issued in a similar way to current US Dollars, however states, localities, corporates and even individuals allowed to issue their own digital currencies as a “promise to pay” that is rolled up into larger DC instruments once cross-network payments are required, or if the promise needs to be underwritten by a more robust authority. This mechanism can be used to roll-up into an international framework, with each cell given the freedom to innovate and explore local benefits of digital currencies autonomously.

## **12. How could a CBDC provide privacy to consumers without providing complete anonymity and facilitating illicit financial activity?**

Using a decentralized identity framework, such as that established by the W3C, decentralized identifiers (DID)s currently trialled by the US Dept Homeland Security's SVIP, the European Union and others – so that the identity of the CBDC holder (or DC holder) is known only to the issuer, with privacy protected by law, so that for general payments the identity need not be known, and where there is a need for identity, say for delivery versus payment use cases, or even retail refunds, a privacy preserving verifiable credential can be provided.

### **13. How could a CBDC be designed to foster operational and cyber resiliency? What operational or cyber risks might be unavoidable?**

As a premise, it should be assumed that nothing is hack-proof. A CBDC would likely be issued on a centralised (or private) ledger. This provides a layer of protection such that the network could be locked down and isolated in the event of a breach. CBDC design should accept that Quantum computer capability could be available at least to national governments at a point not in the distant future, so the solution should be Quantum computer hack-resistant. Algorithms such as SHA 256 have proven to be robust, but this level of robustness should be exceeded for a US CBDC. There should always be recourse in the event of fraud or error, so a decentralised system for CBDCs may not be advisable (notwithstanding that it is possible for a centralised CBDC system to operate within a decentralised system).

## **14. Should a CBDC be legal tender?**

There are several aspects to legal tender that should be considered, as the term is not well defined. We avoid dealing with the definition issue by focussing on use cases involving legal tender.

(i) First that the receipt or payment of CBDC is equivalent to the payment of money for US Federal debts.

(ii) Second that the receipt or payment of CBDC is equivalent to the payment of money for state, corporate and individual debts in US jurisdiction.

(iii) Third that the recipient must accept a CBDC payment (if offered) for the resolution of a monetary debt.

(iv) Fourth that the recipient can demand a CBDC (and no other) as payment for the resolution of a monetary debt.

(v) Can a debt be settled without CBDCs?

For a time CBDC payments will co-exist with other forms of money so an early mandate of (iii) and (iv) may be envisioned but not practical. Indeed, in practice, it is the case today that current legal tender (paper notes and coins) is not always accepted practically as payment especially online.

Implementation of (i) and (ii), at least legislatively seems fair.

As for (v) there should always be alternative mechanism to settle a debt, whether they be monetary or non-monetary.

EPAA thanks you once again for the opportunity to respond to your paper. If you have any questions do not hesitate to contact us on **[policy@emergingpaymentsasia.org](mailto:policy@emergingpaymentsasia.org)**