



**Chamber of Digital Commerce Response to the Federal Reserve’s Discussion Paper on Payments:
The US Dollar in the Age of Digital Transformation**

May 25, 2022

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

Additional benefits, considerations and risks include:

- a. Consideration: Global interoperability amongst other CBDCs (as well as digital assets writ large) is critical. We anticipate a future in which almost anything of value could be tokenized (securities, art, commodities, etc.). Ensuring CBDC’s can flexibly interoperate with other digital assets is also important. We support the open-source approach proposed on 3 February, 2022 by the Boston Fed and Digital Currency Initiative at M.I.T.
- b. Consideration: We recommend that the Fed consult with the BIS, other central banks such as Bank of England, Monetary Authority of Singapore, and Bank of Canada (who along w/ Boston Fed are working with MIT) to identify benefits and risks related to global CBDC interoperability. We also recommend the Fed identify potential fintech partners that can provide knowledge and technology solutions for interoperability.
- c. Risk: We believe the paper emphasizes Know Your Customer (“KYC”) and Anti-Money Laundering (“AML”) compliance at the expense of consumer privacy. As federal lawmakers continue to debate a national privacy law that covers all types of data, the US should ensure that a US CBDC emulates cash and prevents against tracking individuals’ purchasing behavior.

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

In the eyes of many, the US already uses digital money. We make retail transfers and payments through Venmo and PayPal. On the wholesale side, we have digital RTGS systems, ACH, and soon, FedNow. The U.S. also utilizes digital money transfer systems like Western Union and MoneyGram that use SWIFT + CHIPS, etc. Why can't we simply continue doing what we're currently doing and just make it better? The answer is that the existing payments infrastructure is antiquated. It's hard to do atomic settlements over networks that process in T +2/3. Furthermore, these systems employ layers of middlemen, correspondent banking, or other intermediaries, which are costly and inefficient.

One of the obvious differences between a CBDC and current digital money is programmability: the ability to insert a smart contract in the currency. This is impossible to do through existing payments infrastructure.

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

A CBDC could favorably affect financial inclusion. According to a FDIC 2019 survey, approximately 7.1 million US households remained unbanked, and access to a digital wallet could improve access to financial services. Some have suggested that the government could provide a free government wallet to the unbanked.

Remittances account for ~ 25-30% of Honduras, Guatemala, and El Salvador's GDP. According to the World Bank, remittance fees run between 5-10% which disproportionately affects minority communities in the US. A properly functioning CBDC could settle atomically and – if interoperable with other CBDCs – could significantly reduce these intermediary fees.

Education must be a key component of any CBDC rollout. Individuals that do not know how to use CBDCs or digital wallets could fall behind and this may result in even greater economic wealth polarization.

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?

Smart contracts embedded in CBDCs could improve the Fed's efficiency in implementing monetary policy, for example, by speeding up or slowing down the economy by attaching a coupon to the CBDC.

Macroeconomists at the Fed could consider adding new features to programmable money. For example, the Fed could issue a special class of CBDC with an “expiration date” that induces individuals to spend money quickly and grow the economy. Or the Fed could create yet another class of CBDC that can’t be used until the wallet holder turns a certain age, thus providing a financial safety net. All of these interesting and potentially positive features should be considered with personal freedom, privacy and government overreach in mind.

Additionally, the Fed will need to consider from a policy perspective if a CBDC with an interest rate is M0 money. Is it a money market account? Is it a bond?

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

It’s unclear how a CBDC could affect financial stability given that a CBDC is still hypothetical. Yet, we urge you to consider how a CBDC could affect the commercial banking industry, debt and equity capital markets, global commodity trading, etc.

For instance, how what impact would interest-bearing CBDCs have on the business of deposit-taking institutions such as commercial banks? It is vital to research this before implementation of a CBDC, as the substitution of commercial deposits could reduce credit availability for businesses and individuals.

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

There are many ways a CBDC could adversely affect the financial sector. For example, if privacy protections are not put in place or if speed/latency isn’t fast enough or scalable, potential CBDC users will stick to cash. Additionally, if cyber security isn’t adequate and sufficient and the CBDC gets hacked, it will undermine consumer confidence in the CBDC, as well as undermining the financial system itself.

There is a potential that if a CBDC is done well, there will be limited need for digital M1 non-bank money like Venmo and Paypal.

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?

From a policy perspective, the Fed should be focused on opening up to innovation and competition and eliminating existing silos, rather than protecting the current banking system. There is a potential for a hybrid model of a CBDC in a transition period, whereby banks could limit the amount of CBDC they take on balance sheet.

A proper sandbox environment will also be critical for testing the CBDC with the financial sector prior to any broad implementation, in order to assess the real-world impacts of a CBDC. The Fed should also evaluate the potential of a wholesale CBDC, which could have less negative impact on the current financial sector than a retail CBDC.

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?

Cash usage has already declined 20% and has been replaced by non-bank digital money (Venmo, Zelle, Paypal, etc). Given that non-bank digital money is M1 while a CBDC is M0, a CBDC should be designed as a digital bearer instrument. Thus, thinking through the chain of custody is crucial.

A CBDC should have some of the characteristics that people like about cash, including privacy. Finally, a CBDC should be designed with an off-line solution in mind.

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

A logical place for cross-border and digital payments to evolve is China

The most obvious threat to the US dollar is the Chinese RMB and its digital equivalent, the e-CNY. Beijing has made it clear that its medium-term plan is to promote a multipolar currency world. Ultimately, China's goal is for the RMB to be the global reserve currency. It is imperative for the US to evolve to avoid losing global reserve currency status.

Other observations

Costs for cross-border digital payments are falling and will continue to do so. Commercial banks are already working on advancing the speed and cost for FX services. Meanwhile, cyber, operational and technology risk will continue to rise, and this needs to be addressed as the international payments system evolves. Research and scenario analysis is necessary to understand this picture more clearly.

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

Other large economy nations have already made decisions to issue CBDCs. China is the first large country to do so. The European Central Bank will likely be second. Rather than focus on what other nations are doing, we should consider that any US CBDC should reflect American values.

The Boston Fed has done outstanding work with Project Hamilton. Along with MIT, they created core open-source technology for CBDCs, and we expect that the ecosystem of developers, policymakers and other stakeholders will continue to improve upon it. We commend the open-source approach and hope it becomes a de-facto industry standard. If another country (like China) develops a rival CBDC standard and exports it to the many countries where it exerts influence, it could undermine US national security.

Agreement upon an interoperable network is critical to reducing systemic risk. International coordination among the countries dedicated to responsibly adopting a CBDC is imperative. To assure interoperability, a global network of like-minded countries should work to establish agreed upon and adopted principles, protocols, and technology reviews. Research and analysis should be led and coordinated by the US government, regulatory agencies, and the Fed to ensure US dollar reserve status.

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

Persistent research and analysis is always helpful to identify risks that are not yet known or fully understood. Creating a matrix of known risks would be a good place to start adding new risks as insights are gained.

Considerations of quantum computing need to be addressed in addition to AML and KYC compliance issues. Furthermore, monetary policy such as managing inflation were not raised in the paper. Ongoing technological advancements and innovations should be constant considerations.

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

Critically, we need to ensure that a CBDC does not facilitate illicit activity. The Bank Secrecy Act currently requires that commercial banks take steps to guard against money laundering. Policymakers will need to consider whether a similar anti-money-laundering regime would be feasible for a Federal Reserve CBDC, but it may be challenging to design a CBDC that respects individuals' privacy while appropriately minimizing the risk of money laundering.

At one extreme, we could design a CBDC that would require CBDC holders to provide the Federal Reserve detailed information about themselves and their transactions; this approach would minimize money-laundering risks but would raise significant privacy concerns. At the other extreme, we could design a CBDC that would allow parties to transact on a fully anonymized basis; this approach would address privacy concerns but would raise significant money-laundering risks.

Today, commercial banks largely handle retail KYC/AML concerns. When one goes to an ATM, the bank (a) presumably knows who you are, (b) records that you withdrew cash, and (c) limits the amount of cash you could withdraw. Once cash is withdrawn, however, it becomes fully anonymous.

A CBDC could function similarly. Rather than withdraw physical cash from an ATM, one would draw CBDC digital cash from the commercial bank app. Similar to the ATM example, the commercial bank would perform all KYC/AML functions. Once transferred, a user could then choose to “self-custody” the CBDC digital cash in a personal wallet and spend it anonymously.

An international identity protocol to allow access with defined rules protecting privacy could also be considered.

We recommend implementing a permissioned-level of transparency (i.e. only for those allowed, for example - Espresso Systems out of Harvard) and consideration for account-based versus token-based privacy. To avoid the Chinese version of a CBDC, the issue of privacy needs to be further studied.

According to a speech given by Governor Brainard:

“The design of any CBDC would need to both safeguard the privacy of households' payments transactions and prevent and trace illicit activity to maintain the integrity of the financial system, which will require the digital verification of identities. There are a variety of approaches to safeguarding the privacy of payments transactions while also identifying and preventing illicit activity and verifying digital identities. Addressing these critical objectives will require working across government agencies to assign roles and responsibilities for preventing illicit transactions and clearly establishing how consumer financial data would be protected.”

CBDC Design

15. Should a CBDC pay interest? If so, why and how? If not, why not?

If a CBDC pays interest, we must define it. Is it a bond? A money market account? If a CBDC looks like a bond, or a savings account, or a money market account, who regulates it? Will an interest-bearing CBDC be more attractive than deposit-taking institutions like commercial banks? This is particularly important because the risk of commercial bank money substitution is highest for an interest-bearing CBDC. This substitution could reduce credit availability for businesses and individuals.

16. Should the amount of CBDC held by a single end-user be subject to quantity limits?

No, we believe that digital money should be treated equally with cash and cash-equivalents. There must be parity and restrictions would unnecessarily burden CBDC holders.

17. What types of firms should serve as intermediaries for CBDC? What should be the role and regulatory structure for these intermediaries?

Banks, fintech firms, custodial wallet providers, and others would be likely intermediaries to provide KYC and AML functions. These entities should be regulated (licensed) at the federal level versus state and be subject to current money transmitter laws.

18. Should a CBDC have "offline" capabilities? If so, how might that be achieved?

Yes. One practical solution would be to use NFC (near-field communication) chip technology. A physical CBDC "card" could connect to the phone app, etc.

Nevertheless, the issue of double spend is extremely difficult to solve in an off-line situation.

Additionally, if a US CBDC employs blockchain technology, there are certain issues to consider. We draw the distinction between "offline" and "offchain." Off-chain transactions enable quicker transactions, lower fees, and greater privacy protections. Off-chain transactions can handle more volume and therefore make it easier to scale networks. This is a very different issue than offline (like if the power goes out due to a natural disaster, etc).

19. Should a CBDC be designed to maximize ease of use and acceptance at the point of sale? If so, how?

Yes. The easier you make it for people to pay, the more acceptance there will be. Prominently displayed QR codes in retail environments plus users' ability to pay through wallets that are interoperable will make this easy.

20. How could a CBDC be designed to achieve transferability across multiple payment platforms? Would new technology or technical standards be needed?

Interoperability and privacy are key. An ideal standard would be US-based versus international. We recommend utilizing components of the EU's GDPR privacy standards, specifically their compliant data migration policies, as a template.

US would be ANSI X9. There is technology that exists to allow this.

21. How might future technological innovations affect design and policy choices related to CBDC?

- a. Quantum computing a consideration.
- b. IOT is another consideration
- c. The evolution of De-Fi, digital assets, and NFTs are a consideration

22. Are there additional design principles that should be considered? Are there tradeoffs around any of the identified design principles, especially in trying to achieve the potential benefits of a CBDC?

Design principles should include fully open-sourced technology. Inclusion remains an issue – how will those without smartphones participate in the economy? Compliance, privacy, and security must all be factored into the design.