

Circle's Response to Federal Reserve's CBDC Discussion Paper

Circle appreciates the opportunity to provide suggestions to the Federal Reserve on the risks, benefits and policy considerations on central bank digital currencies (CBDCs). Since Circle's founding, we have prioritized responsible financial services innovation and constructive engagement with regulators and public authorities in the United States and around the world.

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

The Federal Reserve's discussion paper on a potential U.S. CBDC raises many of the challenges that exist in the current domestic financial system: a lack of access to the formal financial system for low-income, unbanked, and under-banked individuals; slow and inefficient payment rails; and high transaction costs for cross-border payments and remittances. The discussion paper posits several possible designs of a CBDC that could solve these problems and the related benefits of solving them, including preserving the dominant role of the U.S. dollar in the global financial system. Financial technology can improve upon these conditions, but a CBDC is not superior to other private-sector led innovations.

Many of the potential benefits of a CBDC detailed in the discussion paper are already being met by existing blockchain-based payment system innovations. This is particularly true as public blockchain technology reaches scale and begins to integrate as a settlement option among global payment providers, banks, and financial technology ("fintech") companies. Similarly, improvements to real time payment systems and wholesale payment integrations can satisfy policy goals for how people send, spend, save and secure their money – including in an internet-native form. Bringing stablecoins like Circle's USD Coin ("USDC") under common-sense regulatory guidelines would ensure proper supervision over an asset that is already achieving many of the Federal Reserve's objectives in a potential CBDC. In the longer term, the ability for existing blockchain-based payment system innovations to meet their maximum potential will be greatly enhanced once Congress passes a federal framework for regulating all digital assets.

Circle agrees with the risks detailed in the discussion paper, but wants to highlight several others. Because the discussion paper focuses on an intermediated model for a CBDC that would preserve the two-tiered banking system, these comments will focus on the risks presented by an intermediated model.

First, the discussion paper does not address the costs associated with researching, designing, implementing and maintaining a CBDC. A CBDC would require new technologies, additional human capital and a significant public educational campaign. These costs merit thorough analysis

because, while the Federal Reserve is self-funded and does not receive Congressional appropriations, future Federal Reserve expenditures related to a CBDC will ultimately affect taxpayers.

Second, the discussion paper notes how a CBDC might support innovation. However, Circle is concerned that it would instead stifle U.S. innovation, particularly for new market entrants. Already, a host of companies, including Circle, have leveraged blockchain technology to support trillions of dollars of economic activity with fiat-referenced stablecoins. The introduction of a CBDC by the Federal Reserve could have a chilling effect on new innovations that could otherwise make the U.S. economy and financial sector more competitive both domestically and abroad.

Finally, as detailed in response to question three below, Circle is concerned that a CBDC could in fact worsen issues related to financial inclusion and access. The implementation and deployment of a CBDC could further strain public trust in government and raise concerns about the level of control exercised by government over public money and the financial system. There are legitimate questions about whether a CBDC would remedy existing issues of trust and access for unbanked and underbanked individuals.

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

Many of the benefits of a CBDC are already being met by private-sector innovations, like USDC, through blockchain-based payment systems. USDC is a regulated, fully-reserved U.S. dollar digital currency that is backed by cash and short-duration U.S. government obligations so that it enjoys price parity with the U.S. dollar. The reserves are held in the care, custody and control of the U.S.-regulated banking system and issued in compliance with money transmitter requirements. Each month, Circle publishes attestation reports by a global accounting firm regarding the reserve balances backing USDC in circulation.

USDC does not detract from, but in fact supports, the dollar's role as the world's reserve currency. USDC has supported over \$4.3 trillion in on-blockchain transfers as of May 12, 2022, and over 70,369 active wallet addresses have conducted transactions with USDC in the last 28 days. These data demonstrate how USDC is generating novel economic activity based on the U.S. dollar. Private sector-driven activity using blockchain-based payment system innovations offer an alternative pathway to a resilient, dominant dollar in the face of centralized challenges from China and other countries proceeding with CBDC versions of their currencies. USDC has gained widespread market adoption and brought digital versions of the dollar to international markets in the global digital asset economy. The network effects of this widespread market adoption will continue to advance the cause of the U.S. dollar in digital form.

USDC will continue to play a growing role in lowering the costs and increasing the speed of cross-border payments. In partnership with MoneyGram and the Stellar Development Foundation,

USDC can now be used to efficiently send payments internationally at a fraction of the cost of traditional cross-border payments in fiat.¹

Circle is also working to advance financial inclusion, starting in the United States. Circle's mission of raising global economic prosperity through the frictionless exchange of financial value is part of Circle Impact.² Circle has allocated a meaningful share of USDC dollar reserves to community banks and Minority-owned Depository Institutions across the United States, strengthening their balance sheets and therefore communities. An additional pillar of Circle Impact is to drive digital financial literacy and entrepreneurial efforts in collaboration with leading academic institutions and other partners, including historically black colleges and universities; the first partnership is with Bowie State University in Maryland and Rhodes University in South Africa.

Circle has established key partnerships to help combine some of the best practices of well-regulated, traditional financial and payments institutions with the inherent benefits of open, public blockchains; collaborations with BlackRock³, Visa⁴, Mastercard⁵ and Worldpay⁶ are just a few examples.

Circle is also opening up new corridors to provide humanitarian relief in the U.S. and globally. For example, Circle has helped the legitimate, elected government of Venezuela distribute millions of dollars in desperately needed aid to the nation's front-line medical workers as they battled the COVID-19 pandemic under horrendous conditions. Circle partnered with the Bolivarian Republic of Venezuela (led by President-elect Juan Guaidó), U.S.-based fintech Airtm and the U.S. government to send the relief funds in USDC. The joint initiative established a disbursement pipeline that leveraged USDC to bypass the controls that Nicolás Maduro's authoritarian government placed on Venezuela's financial system.⁷

Circle's deep expertise operating USDC has also led to innovations that have the potential to address problems that have plagued society, in particular the challenge of verifying digital identity. About one billion people globally face challenges proving who they are, limiting their ability to access basic services and economic opportunity.⁸ In recent months, Circle has worked with Block, Coinbase and the Centre Consortium to develop Verite, a set of free, open source decentralized identity protocols and data models that allow people and institutions to cryptographically prove claims about their identities.⁹ Verite has the potential to reduce friction, protect privacy and increase compliance with Know Your Customer (KYC) and anti-money laundering and countering the financing of terrorism (AML/CFT) controls.

¹<https://stellar.org/blog/moneygram-international-launches-a-new-pilot-on-stellar>

² <https://www.circle.com/blog/improving-financial-inclusion-and-economic-prosperity-for-all>

³ <https://www.circle.com/en/pressroom/circle-announces-400m-funding-round>

⁴<https://www.coindesk.com/markets/2021/05/05/visa-circle-team-up-with-fintech-firm-to-drive-crypto-adoption-in-emerging-markets/>

⁵ <https://www.circle.com/blog/mastercard-taps-circle-for-usdc-settlement-pilot>

⁶<https://www.circle.com/en/pressroom/worldpay-from-fis-becomes-first-global-merchant-acquirer-to-offer-direct-usdc-settlement-driving-digital-currency-adoption-to-businesses>

⁷ <https://www.ft.com/content/2a271032-35b4-4969-a4bf-488d4e9e3d18>

⁸ <https://id4d.worldbank.org/global-dataset>

⁹ <https://www.circle.com/blog/unlocking-decentralized-identity-with-verite>

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

The Federal Reserve should more clearly articulate how a CBDC would improve financial inclusion in the United States. A CBDC with financial institutions or nonbank financial service providers acting as intermediaries could simply replicate the current challenges for financial inclusion that exist. According to a 2019 FDIC study, one-half of unbanked Americans do not have a bank account because they cannot meet minimum balance requirements.¹⁰ This poses questions about whether the Federal Reserve would require financial institutions to waive these fees if an individual held CBDCs. Another one-third of unbanked Americans noted a lack of trust in financial institutions, which may not be allayed in an intermediated CBDC system. It is possible that because the public's confidence in government institutions and banks has been declining, a CBDC could make the unbanked or underbanked even less likely to engage with financial institutions.¹¹ Other design choices could also harm financial inclusion; as noted, an interest-bearing CBDC could cause negative impacts to the two-tiered banking system and hurt consumer access to credit and/or raise the cost of credit, potentially increasing the number of Americans who are underbanked.

Additionally, in a scenario where the Federal Reserve issues an interest-bearing or non-interest-bearing CBDC, individuals would presumably have two choices when holding their money at a financial institution or regulated non-bank financial service provider. Such an arrangement would add another layer of complexity to what many unbanked and underbanked individuals see as an already-confusing financial system and could negatively affect one of the key stated goals of a CBDC, namely promoting financial inclusion. Even the financially-literate may not understand the full implications of holding their money in CBDC versus commercial bank deposits. It seems likely that should the Federal Reserve issue a CBDC, a significant public education campaign would be needed to overcome confusion about the new system and possible distrust in a government-supplied solution.

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?

Monetary policy, conveyed through the two-tiered banking system, should remain a public sector sovereign activity under the independent oversight of central bankers. The introduction of CBDCs, which could have potentially corrosive pressure on bank deposits and increase consumer distrust in which forms of money are presumed to be the safest, could diminish the transmission chain of monetary policy.

¹⁰<https://www.fdic.gov/analysis/household-survey/2019appendix.pdf>

¹¹ <https://news.gallup.com/poll/1597/confidence-institutions.aspx>

It is possible to promote fair, responsible free market competition for the movement of money within the oversight of central banks and inside the U.S. regulatory perimeter. One way to achieve this standard is to review the possibility of granting digital legal tender status to various forms of privately issued electronic money and digital currencies, where the underlying reserve assets are in the care, custody and control of the U.S. regulated banking system (and possibly even held directly with the Federal Reserve).

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

A CBDC, both in interest bearing and non-interest bearing forms, creates potential domestic flight-to-quality or flight-to-safety problems which could destabilize the two-tiered banking system. The potential systemic effects of a CBDC could pose serious and detrimental effects to the banking system and the wider economy.

It is not clear from the Federal Reserve's discussion paper that a CBDC would avert run risk or other financial stability concerns. The report notes "[t]he ability to quickly convert other forms of money—including deposits at commercial banks—into CBDC could make runs on financial firms more likely or more severe. Traditional measures such as prudential supervision, government deposit insurance, and access to central bank liquidity may be insufficient to stave off large outflows of commercial bank deposits into CBDC in the event of financial panic." In discussing solutions to such a problem, the Federal Reserve's discussion paper proposes limitations on the overall amount of CBDC that an end user could hold, or hold at a given time. Such limitations raise serious questions about the usefulness of a CBDC as money.

The scenarios contemplated by the Federal Reserve could create more confusion for end users of a CBDC and raise the possibility of negative consequences for the broader financial system. The creation of a non-interest bearing CBDC to reduce flight-to-quality effects could cause confusion about the different "types" of money offered at an individual's bank or that individuals could hold. If a non-interest bearing CBDC were issued by the Federal Reserve, it is difficult to say how an end user might evaluate the choice of whether to hold their funds in a CBDC rather than a commercial bank deposit. Absent more information about end user choice and attitudes toward the use of a CBDC, the risks of a non-interest bearing CBDC versus commercial bank deposits remain unclear. The current model offered by privately-issued digital currencies provides an important "air gap" between reference assets – such as cash, cash equivalents and high quality assets inside the banking system – and tokenized assets on public blockchains that results in no new money creation and preserves the two-tiered banking system. Importantly, the transmission of monetary policy is also preserved.

As cryptocurrencies, digital assets, and public blockchains have developed over the past decade, entrepreneurs in this space have built a \$2 trillion dollar sector. This period has seen risks, death spirals and failures, lessons learned and growing regulatory understanding and clarity on how to responsibly harness these innovations. These risks should remain within the free market. The United States should espouse and practice activity-based, technology-neutral regulations, and regulate the economic behavior of digital assets rather than a catch-all approach. Not all digital assets behave in the same way or perform similar functions. If a digital asset behaves like a

currency or payment system, it should be afforded the benefits of digital legal tender status or conformity with well-laid money transmission, e-money, financial markets infrastructure and prudential rules.

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

Early evidence suggests the introduction of CBDCs could put domestic capital flight pressure on the two-tiered banking system because the presumption could emerge that a CBDC represents a lower-risk currency when compared to fractional reserve banking or other forms of money and payments in circulation. Additionally, depending on which form of CBDC is adopted, CBDCs could also disrupt other forms of payment and money circulation such as e-money and debit/credit card networks, among others. While a non-interest-bearing CBDC might limit the shift away from commercial bank deposits compared to an interest-bearing CBDC, a non-interest-bearing CBDC could still pose risks to the two-tier banking system by introducing a “risk free” form of money that end users may prefer to hold and transact with. In this case, a non-interest-bearing CBDC arrangement would put pressure on the two-tier banking system by curtailing liquidity and the flow of funds through traditional payments processors, thereby shifting that activity directly within the scope of the central bank.

Ironically, the advent of the digital assets industry and blockchain-based payment systems, which were originally framed as threats to traditional banks and financial services firms, have created and protected wholesale industries in both the analog and digital financial markets. Continuing to harness this private sector innovation, while attracting the billions in investor capital and entrepreneurial talent into the world’s important financial centers – particularly those in the United States – can ensure an always-on internet economy exists amid global regulatory competition.

Another challenge in the financial sector is that a CBDC could obligate banks, e-money issuers, card networks and financial technology firms, among others, to adopt a government-issued or mandated technology standard. This might weaken economic competitiveness and growth, potentially limiting payment system and money movement optionality in both domestic and cross-border settings. Finally, CBDCs could potentially diffuse critical financial crime compliance, anti-money laundering and other shared responsibilities in the financial sector for combating illicit finance. This is another area in which the advent of competitive blockchain-based payment systems is producing exponential gains in financial integrity and forensics.

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?

The use of cash in the United States has been declining steadily over the last several years, in large part due to the advancements made by the private sector to improve the custody and payments of dollars. For instance, Worldpay found the use of cash declined by over twenty percent from 2018 to 2020 and will only account for ten percent of point-of-sale transactions in the United States by 2024.¹² It is Circle's view that the Federal Reserve should allow the private sector to continue to responsibly innovate to support consumer-driven trends away from cash as a means of payment. A CBDC would not be a substitute to the physical dollar; it would be more akin to a substitute for the privately-issued electronic money that individuals use today.

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

The market and technological infrastructure for domestic and cross-border payments has changed significantly and quickly over the past three decades. USDC brings the benefits of digital currency – fast, lower-cost, highly secure, global and interoperable – without the drawbacks of extreme volatility that has plagued other cryptocurrencies. Fiat-backed stablecoins with transparent reserves have provided an efficient “digital dollar” settlement layer for digital asset trading markets. Through robust competition and growth in the digital asset space, stablecoins are now used in a wide-variety of applications. Other financial market participants, such as major credit card companies, small businesses, remittance companies and others are making USDC a native settlement option for their businesses. This increases market competition and choice for consumers for payments, while building a bridge between digitally-native financial services and real-world use cases.

As mentioned in the response to question two, Circle is innovating in payments by partnering with Worldpay and Moneygram, and piloting new uses of stablecoins and digital assets to lower transaction costs and facilitate the efficient movement of money across borders using USDC.

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

Over 80 countries are in some stage of researching, developing, piloting or launching a CBDC to establish the dominant currencies of the internet.¹³ This is a high-stakes competition that will shape the political and economic value systems of this century's digitally-native global economy. By nearly every measure, the United States and the U.S. dollar are already winning this digital currency race because of private sector innovation that uses open-source technology and open standards and protocols. While the United States considers ideas for a CBDC, a prospect that will likely take many years to develop and pose significant risks, private sector innovation is solving many of the intended goals of a CBDC.

¹² <https://worldpay.globalpaymentsreport.com/en>

¹³ <https://www.atlanticcouncil.org/cbdctracker/>

One reaction to the developing digital asset industry is to seek to heavily regulate and curtail free market activities, to nationalize the technology and infrastructure, and to launch and administer government-controlled digital currencies. Some countries, such as China, have already taken this approach. The introduction of a CBDC might seem like the only logical U.S. policy response to compete in the digital currency space race. However, it is the values of openness, the preservation of privacy, free-market competition, and open intellectual property that have powered U.S. economic growth and made the dollar the world's reserve currency. These principles have helped the United States lead in internet technology standards and industries and are the same values that have led to the flourishing market for digital currency and blockchain technology today. Other countries are closely watching how the U.S. government proceeds with a CBDC, and so the United States should serve as a model for how to balance public sector oversight and private sector innovation. While the Federal Reserve may develop a CBDC with the proper guardrails to protect consumers, the U.S. cannot guarantee that other countries would do so responsibly and the U.S. should be cautious to endorse a system that could be easily abused by autocratic governments.

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

The Federal Reserve's discussion paper does not expand on the potential adaptation costs associated with the implementation of a CBDC, including for businesses and individuals that would need to accommodate transactions involving a CBDC. These costs could range from new back-end settlement processes to customer-facing point-of-sale (POS) systems, and they could affect millions of businesses and individuals transacting with a potential CBDC. Additionally, financial institutions such as banks, credit providers, lenders and others could bear associated costs with absorbing a new asset class in the form of a CBDC, and integrating that asset within their existing systems – including determining how to offer novel products and services in a CBDC.

Additionally, the paper does not discuss in detail how a Federal Reserve-issued CBDC would manage existing financial crime compliance programs used by financial institutions pursuant to the Bank Secrecy Act. Given the complexity and difference in approaches taken by regulated entities, the Federal Reserve should have more specificity for how the public sector might manage the risks, versus the current model that is dependent on the private sector.

Privately-issued stablecoins represent a clear alternative to manage the risks and challenges of a CBDC that the Federal Reserve has outlined in its discussion paper, and to those mentioned above that have not yet been contemplated. The United States must still fully regulate the private issuance of digital currencies, like stablecoins, at the federal level. A well-designed federal regulatory regime for private stablecoin issuance would likely make a Federal Reserve-issued CBDC redundant. The timing of the deployment and implementation of a CBDC is also an important factor. As U.S. Treasury Secretary Janet Yellen said in an April 2022 speech, “[W]e must be clear that issuing a CBDC would likely present a major design and engineering challenge that would require years of development, not months.” The Federal Reserve's plan to launch the FedNow Service, a new instant payment system, provides an instructive example of the time that may be required to deploy a CBDC.

It could be challenging for the Federal Reserve to issue a CBDC on a technology standard that does not quickly become obsolete, given the pace of technological advancements. In the meantime, trusted, regulated stablecoins like USDC are building on the latest technology – such as open, public blockchains, and blockchain-based payment systems – and meeting the market’s demands for speed, lower costs and efficiency in a manner that is safe, transparent and compliant with existing regulations.

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

The presumption of privacy and the universally free and lawful use of money is an important principle and human right. CBDCs and centralized payment system innovations, particularly those that are government-led or developed by potentially repressive countries, pose serious potential breaches of this public trust. The prospect of social credit scoring, deplatforming individuals from public money or creating financial redlines, among other risks, are real public policy challenges that should be considered when contemplating a CBDC.

In the intermediated system described by the Federal Reserve, it seems likely that the Federal Reserve would, technically, be able to have access to an individual’s interaction with a CBDC depending on the design structure. In this scenario, the transaction records, geolocation, and spending habits of end users might be viewable by the Federal Reserve and potentially stored in vulnerable “honeypot” databases.

While digital assets in the past have been synonymous with anonymity and illicit activity, the industry is now moving toward standards that preserve an individual’s right to privacy while allowing for the prevention and detection of illicit financial flows. This duality is critical for digital assets to be part of the domestic and international financial systems. Circle has, with other partners in the industry, developed Verite, a digital identity model that would provide a verifiable and proven identification that is scalable, usable by anyone, and interoperable across systems, while also providing individuals with the certainty that only the minimal amount of information is shared (to protect their own privacy).¹⁴

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

The centralized technological frameworks that are being proposed and evaluated to issue a CBDC could amplify existing cybersecurity vulnerabilities in the U.S. financial system, potentially exposing the Federal Reserve to new and worsening cyber attacks. The cyberattacks against

¹⁴ Example: Forbes, 2017, *The Equifax Breach and the Case for Digital Identity*, at: <https://www.forbes.com/sites/dantedisparte/2017/10/02/the-equifax-breach-and-the-case-for-digital-identity/?sh=160605634e24>.

Equifax, Solar Winds and the Colonial gas pipeline are just three examples of attacks that have had widespread, damaging implications for the economy in recent memory. However, the development of public blockchains continues to leverage the inherent cyber resilience of distributed systems. Just as the failure of any one bank erodes confidence in banking, a CBDC would also transition this risk to central banks, possibly negating the benefits of strategic risk-sharing structures and operational “air gaps” between participants in the financial system.

14. Should a CBDC be legal tender?

In May 2021, the Federal Reserve issued a public statement that said:

“As the Federal Reserve explores the potential benefits and risks of CBDCs, the key focus is on whether and how a CBDC could improve on an already safe, effective, dynamic, and efficient U.S. domestic payments system in its ability to serve the needs of households and businesses. ‘We think it is important that any potential CBDC could serve as a complement to, and not a replacement of, cash and current private-sector digital forms of the dollar, such as deposits at commercial banks,’ [Federal Reserve Board Chair Jerome H.] Powell said. ‘The design of a CBDC would raise important monetary policy, financial stability, consumer protection, legal, and privacy considerations and will require careful thought and analysis—including input from the public and elected officials.’”

As mentioned in previous answers, it is possible to promote fair, responsible free market competition for the movement of money within the oversight of central banks and inside the U.S. regulatory perimeter. One way to achieve this standard is to review the possibility of granting digital legal tender status to various forms of privately issued electronic money and digital currencies, where the underlying reserve assets are in the care, custody and control of the U.S. regulated banking system – possibly even held directly with the Federal Reserve.

In his January 2022 testimony before the Senate Banking, Housing and Urban Affairs Committee, Chair Powell said that a CBDC could coexist with well-regulated, privately issued stablecoins. If the Federal Reserve issues a CBDC, it should be designed to ensure fair competition with private stablecoins like USDC.

The Federal Reserve’s discussion paper contemplates both interest-bearing and non-interest bearing forms of a CBDC. The paper’s analysis of an interest-bearing CBDC indicates that an interest-bearing CBDC would likely replace cash and deposits at a commercial bank, contradicting the Federal Reserve’s desire for a CBDC to be complementary to cash and commercial bank deposits. While an interest-bearing CBDC might prove attractive to individual end users, such an arrangement raises intermediation concerns mentioned in previous answers. Further, as mentioned previously, if a CBDC is not designated legal tender, it would compel the Federal Reserve to communicate what incentive programs the private sector and other market participants would have to absorb a CBDC.

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

Additional time should be spent investigating the costs associated with the maintenance of the technology associated with a CBDC. It is conceivable that the costs to maintain and update a Federal Reserve-issued CBDC that incorporates the latest technology stacks and network infrastructure would be substantial beyond the initial implementation and deployment stages. To manage these cost risks, it is possible that Congressional action in the form of new legislation and appropriations may be necessary. Additionally, there remain undiscussed adoption risks related to the centralized model for a CBDC. It is unclear from the discussion paper whether the Federal Reserve would implement an incentive structure for market participants to operate with a potential CBDC (including for businesses) and use it. And, if a CBDC were designated as legal tender, would market participants be compelled to use and accept it? As discussed in above responses, the introduction of a CBDC would necessitate robust public education around its purpose and use, not only for end users, but also for businesses and other financial service providers.