Digital Asset

THE DIGITAL DOLLAR PROJECT

Creating a US CBDC: four fundamental truths

Introduction

As the US moves forward with its exploration of a US Central Bank Digital Currency, or CBDC, we have identified four fundamental truths that underpin our private sector-driven analysis and experimentation. As we begin 2023, we believe it's important to articulate these truths to establish a clear and strong foundation upon which to build. Our goal is to remove some of the ambiguity and uncertainty about core features of a US CBDC so that collective energy can be focused on setting standards based on productive dialogue and continuing to test the potential of a digital currency.

Globally, 114 central banks are in different stages of their CBDC exploration, and momentum is building quickly with several programs being piloted or in limited use. Four CBDCs are in deployment in 11 countries.[1] One of the CBDCs was launched by the Eastern Caribbean Currency Union, which has eight members. The other CBDCs were launched by the central banks of Jamaica, Nigeria, and the Bahamas. Given the interconnected nature of the economy, these global developments will ultimately affect US businesses and consumers regardless of whether the US decides to deploy a CBDC.

However, given the prominence of the US dollar as the world's reserve currency, we believe the robust exploration of a US CBDC is essential to sustaining international trade and financial stability. Furthermore, a US CBDC presents a potential and unique opportunity to transform markets and lives by enhancing financial inclusion.

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[1] https://www.atlanticcouncil.org/cbdctracker/

1. What CBDC is… and isn't.

CBDC is a digital currency issued by a central bank and is legal currency/legal tender backed by the full faith and credit of a government. A US CBDC would be fiat money and, just like US paper currency and coins, would be backed by the United States government. It would provide an alternative to – not replacement for – cash. A well-designed US CBDC could offer businesses and consumers a more efficient way to participate in an increasingly digital economy, with appropriate safeguards and oversight.

CBDC is not a cryptocurrency. Cryptocurrencies are digital or virtual currencies that are not issued by a central authority, such as a government. They are secured by cryptography, run on a decentralized network, and not subject to control by government(s) or central authorities.[2] Cryptocurrency is highly volatile to intraday and longer-term price swings, making it too speculative for use in routine transactions. Other concerns include the enormous energy consumption needed to 'mine' certain cryptocurrencies and a lack of transparency, which has made it attractive for use in ransomware and other illicit activities.

CBDC is also not a stablecoin. Stablecoins are a type of cryptocurrency whose value is pegged, or tied to, that of another currency, commodity or financial instrument.[3] While a stablecoin's value may be pegged to the US dollar, it is not issued by or an obligation of the US government. Stablecoins are issued by private companies. As such, they are deposit liabilities of a private company, which can limit their use and acceptance.

We believe that a digital currency must have the same characteristics as the dollars and coins that are our fiat currency today. Namely, a US CBDC would be issued by the US government and be an obligation of the government. Like physical currency, it could be widely available to the general public, maintain a stable value, provide an efficient, low-cost way for individuals to make payments to each other or businesses and continue to offer privacy protections. As a liability of the Federal Reserve, a US CBDC could be the safest digital asset available to the general public with no associated credit or liquidity risk.[4]

2. Privacy is essential

Privacy is a foundational principle in today's financial system. As such, it would carry forward – and potentially be enhanced – with the introduction of CBDC.

We are not looking to dilute privacy by creating a US CBDC. Rather, a CBDC leveraging privacy-enhancing technology could be more private than digital payments via private companies that are not subject to the Fourth Amendment.[5] The technical capabilities of a digital currency, including the ability to embed terms and requirements right onto the asset itself, could allow for greater privacy controls including the ability for individual customization.

All financial transactions today have some level of oversight, whether that is by the merchant(s) or bank(s) that process your credit card transactions, by regulators based on the type or size of a transaction or by the owner/developer of the app you use to repay a friend for coffee.

[2] https://www.investopedia.com/terms/c/cryptocurrency.asp
[3] https://www.investopedia.com/terms/s/stablecoin.asp
[4] https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf
[5] https://constitution.congress.gov/browse/amendment-4/

Currently, to some extent how you choose to pay or transact gives you some flexibility in who sees your activity:

A gift purchased with cash may allow you to surprise your partner who might otherwise see it on a credit card statement. However, even cash gifts of a certain size are subject to review as part of agreed regulatory safeguards against counterterrorism.

Financial transactions are subject to various levels of scrutiny throughout their lifecycle, whether that's by the parties involved in the transactions; the intermediaries that process a loan, purchase or sale; or appropriate regulatory bodies or auditors authorized to view the transaction. Often, these transactions are viewed in aggregate but details are available on the individual transaction should additional scrutiny be necessary.

Financial institutions and companies regularly undergo audits, either by private firms or by authorized regulatory bodies, to ensure that their books and records are in order, their profits match their disclosures, and that they are appropriately using funds. Additionally, banks and other entities that hold or accept client assets, such as cash on deposit, conduct ongoing and rigorous internal audits.

In reality, nearly every transaction has some level of visibility and oversight. And, just as transactions are neither fully private nor fully visible today, the same would be true for a US CBDC. Controls can be set at a granular level, starting from a baseline of protecting privacy:

The CBDC issuer or supervisory authority should be able to monitor compliance with anti-money laundering and other legal limits on payments. While digital currency movements would be tracked, not all details of the transaction would be visible to the Central Bank.

The provider of the technology infrastructure and any entity that is not party to the transaction should not have access to components of the transaction, unless expressly authorized by the authorities for compliance purposes and disclosed to users.

Unless desired and arranged by the relevant parties, transactions would not be visible to those involved in preceding or following transfers. So, if A pays B, B pays C, and C pays D using the same funds, each entity is only aware of the transaction in which they are participating. Just as today, A would not see any of the following transactions (between B ► C or C ► D) and D would not see transactions occurring earlier in the chain.

It's important to remember that privacy choices are not binary. It's not all or none, and privacy is not a final destination. Privacy protections have evolved and will continue to do so over time based on the needs of individuals, consumers, businesses, financial infrastructures, regulatory authorities and the government.

Starting from the premise that any US CBDC must match existing privacy protections, we also see opportunity for improvement. The technology that will underpin CBDC could afford greater scope for customization, similar to how you can adjust privacy settings for different apps on your phone. That said, defining the initial scope of those privacy protections – how broad, deep or customizable they will be – is a valid and essential part of the discussions and exploration that must pre-date the issuance of a US CBDC.

Given the historic opportunity to design a new, digital currency, it is worth taking time to consider what levels of privacy protections we would want for a US CBDC. The Digital Dollar Project has defined core privacy principles, and will be holding a series of focused roundtable discussions with experts and potential users during the first quarter to dive more deeply into specific privacy topics.

3. CBDC is not intended to replace cash.

A US CBDC is not intended to replace cash. Whether consumers and businesses ultimately use CBDC rather than cash on a day-to-day basis is their choice – just as whether they choose to use cash or a credit card is a matter of personal preference today.

Other countries may have different goals for their CBDC, but the US objective is to add another, more flexible and trusted form of legal tender with a digital currency suitable for use in an increasingly digital world. This will allow us to support liquidity, broaden financial inclusion and deliver multiple benefits to businesses and consumers, including more efficient processing, accelerated access to funds and potentially lower costs.

A thoughtfully designed and properly executed CBDC could complement cash and support continued confidence in the soundness of US currency and financial systems. As a digital fiat currency equivalent to the US dollar, it provides an effective safeguard against digital currency fragmentation, enhances the ability to implement monetary policy and enables the US to maintain a global leadership position – while creating new avenues of efficiency and innovation.

4. The Central Bank is not looking to disintermediate commercial banks.

In its January 2022 paper, Money and Payments: The U.S. Dollar in the Age of Digital Transformation, the Federal Reserve explicitly highlights the importance of an intermediated model using commercial banks and regulated non-bank financial service providers. The current two-tier banking system offers inherent benefits for both business and consumer and, with the addition of a US CBDC, could look like this:

- In the first tier, the Central Bank provides the system of record for all consumer accounts and positions.
- In the second tier, the Central Bank delegates authorities to banks and other regulated payment service providers allowing them to offer access and services to their customers, and to perform KYC, AML, and other regulatory requirements.[6]

Therefore, the respective roles of the Federal Reserve, as the issuer of US CBDC, and commercial banks and other regulated payments companies, as the conduit to and provider of financial products and services, will continue. Naturally, there are likely to be some changes given the nature of a digital currency and how it behaves but we do not expect a seismic shift.

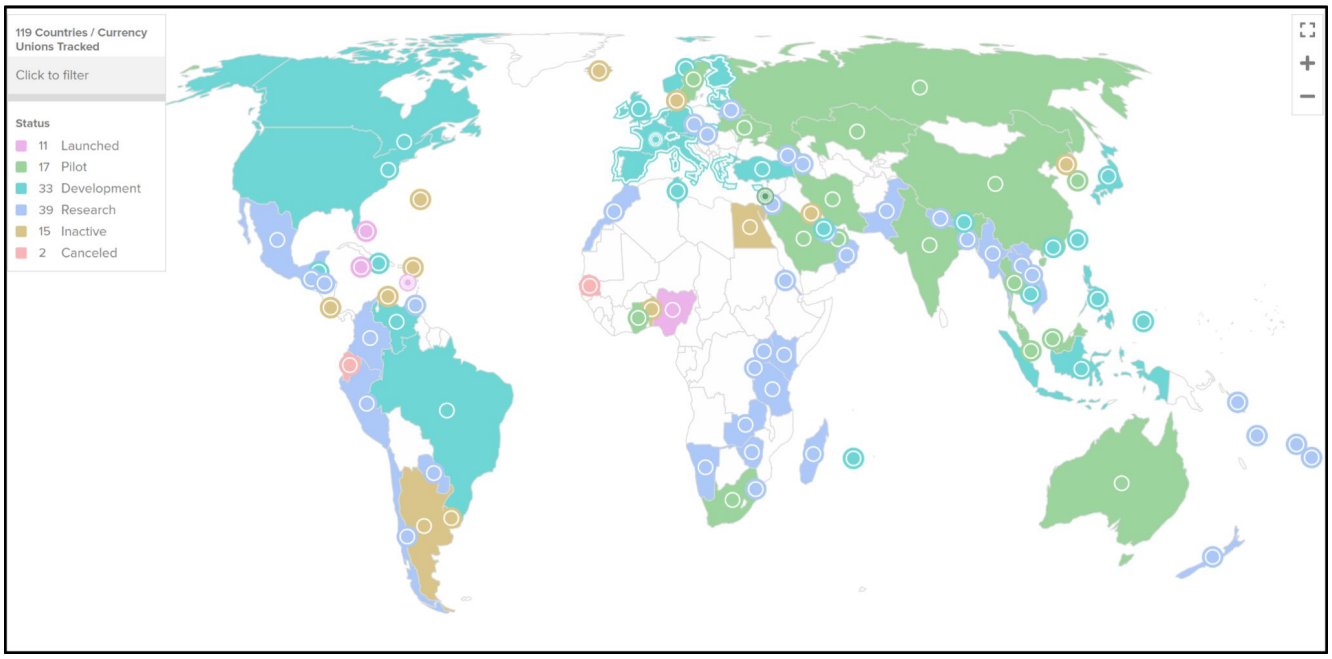
[6] Central Bank Digital Currency: Principles for Technical Implementation, May, 2021 (Duffie, Mathieson, Pilav)

As part of its exploration of potential risks, the Federal Reserve has already outlined various methods for minimizing the pressure a US CBDC might impose on the existing banking system. For this, the design of the US CBDC and its technical capabilities are paramount. Some options include creating a non-interest bearing CBDC; capping the amount of CBDC any individual can hold or putting time restrictions on CBDC accumulation; or excluding CBDC from FDIC insurance. Individually and collectively, these actions could disincentivize the holding of large CBDC balances.

In conclusion

With global CBDC momentum building, the US government's exploration of a potential CBDC should continue apace. Importantly, that exploration should be anchored in empirical data and real-world use cases and grounded in the four fundamental truths discussed above.

Central Bank Digital Currency Tracker



The private sector also has an important part to play: they should consider how a potential US CBDC, or CBDC developments around the world, might impact their business. There is also a role for private sector research and experimentation to generate empirical data and results that inform policymakers and complement ongoing government initiatives. The CBDC conversation will benefit from ongoing learning as various POCs and pilots commence or conclude; these can further inform design and development.

The Digital Dollar Project has created a pilot program in coordination with the industry to explore use cases for a potential US CBDC under real-world conditions. The Digital Dollar Project recently completed its first private sector initiated *simulated* US CBDC in coordination with the Depository Trust & Clearing Corporation. The pilot explored how a US CBDC could operate within the existing US clearing and settlement structure.[7]

[7] https://www.dtcc.com/news/2022/november/30/dtcc-shares-findings-from-its-pilot-with-the-digital-dollar-project

In the coming months, The Digital Dollar Project will be holding a series of privacy-focused roundtables to convene academic and industry experts for in-depth, inter-connected discussions on enhancing individual privacy in the building of a potential US CBDC. This is part of our ongoing commitment to foster broad discussion and engagement in this critical topic. Likewise, Digital Asset will continue contributing its technical expertise and thought leadership to the CBDC conversation, sharing best practices and participating in pilot programs and implementations.

We look forward to continuing the conversation and will share periodic updates.

For more information on the Digital Dollar Project's work on building a US CBDC, please click here to download its latest whitepaper entitled "The Digital Dollar Project: Revisiting the Digital Dollar Project's exploration of a U.S. central bank digital currency."

DDP Privacy Principles

Protected Individual Privacy (Government)
People should be able to use a US CBDC without making themselves subject to undue government surveillance. Law enforcement access to CBDC usage data should be strictly controlled by due process and other applicable US laws, including the Fourth Amendment.

Protected Consumer Privacy (Corporate)
A CBDC should provide users with ownership over their data, enhancing the privacy standards that consumers see today. People may benefit from the above-board, contractual sharing of information with financial services providers, or they may refuse it.

Enhanced Security
A US CBDC should improve and not degrade people's security against theft, hacking, illegal seizure, and fraud. It should provide people with more secure ways to handle money individually, on a system that is secure against attacks and legally protected, with money-handling tools that protect against the frauds that an unfamiliar technology might otherwise allow.

Greater Accessibility
A U.S. CBDC should improve Americans' and global dollar users' access to financial services. Because it is a more efficient system, it should cost less to engage in basic financial transactions. And as an open system, it should draw competition into financial services that produce better services at lower costs.

Trusted and Transparent
The system on which a U.S. CBDC runs should be operationally transparent so that various parties – governments, NGOs, businesses, and academics – can independently assure themselves about its technical functioning, security, and its resistance to impermissible monitoring or other exploitation.

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The Digital Dollar Project is a nonprofit organization created to encourage research and public discussion on the potential advantages and challenges of a U.S. Central Bank Digital Currency (CBDC) — or a "digital dollar." The Project is focused on convening private sector thought leaders and proposes possible models to support the public sector through pilot experimentation and working groups. The DDP will identify options for a potential CBDC solution to help enhance monetary policy effectiveness and financial stability; provide needed scalability, security and privacy in retail, wholesale and international payments; and integrate with existing financial infrastructures.

Digital Asset

Digital Asset is a software company that modernizes legacy financial systems with Daml, our smart contract language, and Canton, our privacy-enabled blockchain platform. Together, this platform powers cutting-edge smart contracts and blockchain solutions, helping customers unlock new networks of value with sophisticated applications. Leading financial services, insurance, and healthcare organizations are partnering with Digital Asset to create new, multi-party solutions that transform disparate silos into synchronized networks.

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