Deloitte.



August 16, 2021

Central Bank Digital Currencies (CBDC): Regulatory and policy considerations in the US

Recent Federal Reserve activity sheds light on how central banks can foster innovation that serves the public interest in the new money era

The Federal Reserve Bank of Boston (Boston Fed), in collaboration with the Massachusetts Institute of Technology's Digital Currency Initiative (DCI), will soon release a discussion paper offering preliminary analysis on its Project Hamilton initiative to build and test a hypothetical digital currency platform. The release is expected to include any computer code utilized in the research partnership to be made available to the public under an open-source license so that interested parties can engage, review, and modify the software used in creating a possible CBDC.[#]

The Boston Fed's forthcoming discussion paper represents the growing interest in the potential development of a CBDC in

the US.^{III} In addition to the research collaboration between the Boston Fed and DCI, which began in August 2020, the Federal Reserve Board (FRB) has engaged a team of experts to explore the technological and policy issues associated with innovation in payments, clearing, and settlement, including the benefits and risks associated with digital assets.^{IV} In May 2021, the FRB announced plans to publish a separate discussion paper for public comment on digital assets, including CBDC's benefits and risks.^V

Financial industry observers have taken note, too. The Economist, for one, says that "state digital currencies are the next great experiment in finance," ushering in a new era in which old (e.g. physical cash) and new monies (e.g. digital currencies) will need to co-exist.^{vi}

While some CBDC pilots are advancing globally, the US will undergo extensive policy and design research before moving forward with its own CBDC

The theoretical concept of CBDCs emerged several years ago,^{vii} and CBDC pilots are now underway at several central banks including the central banks of China, the European Union, England, Sweden, Canada, and the Bahamas.^{viii} According to a January 2021 Bank for International Settlements (BIS) report, 86% of central banks surveyed by the BIS said they were engaging in research, experiments, or other work related to the development and use of CBDCs.^{ix} However, 60% of respondents replied that they were unlikely to issue a CBDC in the next six years.^x

In the US, there is a growing narrative that a CBDC could or would potentially crowd out all other private digital assets, such as stablecoins^{xi} or Bitcoin.^{xii} Other observers, however, suggest that both stablecoins and cryptoassets are not in competition with CBDCs or each other but, rather, are complementary components in the future of money.^{xiii}

With research being in its early days, there is understandably no consensus view in the US, with some prominent financial authorities even likening a CBDC to "a solution in search of a problem."^{xiv} Federal Reserve Board Chair Jerome Powell has said it is more important for the US "to get it right than be first" when contemplating any development of a CBDC.^{xv} Powell has also said that the Federal Reserve would seek "very broad support in society and in Congress, and, ideally, that would take the form of authorized legislation, as opposed to a very careful reading of ambiguous law to support [creating a CBDC]."^{xvi}

In the first part of this Point-of-View (POV) series, we focus on several policy objectives that will guide the potential introduction of a CBDC

in the US and consider some of the unresolved policy and regulatory matters.^{xvii} The policy and regulatory framework development will inform the public and financial institutions on what CBDCs might be most beneficial for, such as a policy tool or as a complement to them.

Background on CBDCs

The BIS defines a CBDC as "a digital payment instrument, denominated in the national unit of account, that is a direct liability of the central bank."^{xviii} CBDCs can be designed for use by regulated financial institutions (e.g., wholesale CBDCs) or by the broader consumer economy (e.g., retail CBDCs).^{xix} They can offer settlement finality, liquidity, payments integrity, and other unique advantages of central bank money. CBDCs have been characterized as "an advanced representation of money for the digital economy," and much commentary has focused on the need for digital money to "be designed with the public interest in mind."^{xx}

Electronic central bank money exists in the US today. The key difference between it and a CBDC is that, whereas existing central bank digital money is available only to depository institutions with access to Federal Reserve accounts, a CBDC could be made available to the public.

There are numerous design choices, technical dimensions, and potential economic features of CBDCs that have been examined and well-explained by the BIS, central banks, and many other financial industry commentators.^{xxi} Assessing the merits of each architecture and approach is an area of ongoing research for many stakeholders, including the US Congress. While it is widely recognized that retail and wholesale CBDCs have the potential to bring efficiency and benefits to the global economy, CBDCs are still a new concept with significant technologies, policy, privacy, and risk considerations.^{xxiii}



In today's financial system, digital fast money is available only to regulate financial institutions in the form of reserves accounts held by commercial banks at the central bank. Wholesale CBDCs would, in theory, be similarly restricted to financial institutions. Retail CBDCs, in contrast, are available to the general consumer economy.

With the retail CBDC, there are two prominent options. Account-based retail CBDCs would be linked to an identification scheme, and all users would need to identify themselves. Token-based retail CBDCs would be accessed via password-like digital signatures and could be accessed anonymously.

CBDCs and the public trust

Interest in CBDCs comes at a critical time for financial markets. The rapid migration to digital payments spurred on by the pandemic, plans for the use of foreign CBDCs in cross-border payments, and concerns about financial exclusion in the economy have raised awareness of a quickly evolving payments ecosystem.^{xxiv} Additionally, there are growing expectations for safeguarding privacy and identity as well as the responsible use of data in payments and protection from cyberattacks. Research has shown that US consumers trust traditional financial institutions and the government itself to protect their personal information significantly more than they do big tech companies.^{xxv}

Central bankers are aware that they cannot ignore the advent of new forms of digital money and realize they may individually need to play a central role in the system rather than remaining an observer.^{xxvi} In the US, these policy areas will undergo extensive research before any final decisions are made.

What policy objectives will be key in guiding the design of a CBDC in the US?

Consumer privacy and data governance

The vast amount of consumer information needed to operate a CBDC makes governance over data a key issue. Operating a CBDC through a central bank assures that there is no competitive advantage given to a commercial provider. However, regardless of the operator responsible for safeguarding, consumer privacy through good data governance and internal controls (and supporting consumer confidence) is critical for an effective CBDC in the US.

Monetary policy and financial stability

One of the biggest issues with advancing CBDCs is the potential for disintermediating the role of commercial banks. US policy discussions often highlight that a CBDC should not disrupt the role that banks play in capital creation and liquidity. Regulators are aware of concerns about the potential for unintended consequences of any CBDC design and its impact on the financial sector, especially given the nature of the fractional banking system today. Clarity around the role that the Federal Reserve wants or does not want to play relative to performing Bank Secrecy Act (BSA), anti-money laundering (AML), and know your customer (KYC) requirements -- and whether transaction records will be accessible by the central bank -- will be critical to a CBDC's policy design.

CBDCs can support design features that enhance the transmission of monetary policy, such as attaching interest payments or directly distributing currency to the public (in lieu of checks such as those distributed through the recent COVID-19 relief packages in the US). CBDCs could also create other implications for trade facilitation, foreign exchange stability, reduction of counterparty credit risk, and currency control.

CBDCs could have the ability to act during financial market stresses which are not or may not be necessarily associated with or driven by the risks associated with other digital assets (such as cryptocurrencies and some stablecoins). At the same time, there is some concern that a CBDC could lead to significant declines in reserves at banks during periods of stress, potentially pushing rates higher.

With monetary policy currently effected through the banking system, any shift in this approach would be carefully considered. A CBDC could provide a monetary policy tool that policymakers are giving serious attention to whether being deployed or not.

Financial inclusion

While there are several underlying causes for the large number of "unbanked consumers," a CBDC may lower transaction costs making digital assets more affordable to the unbanked. The potential for the average consumer to hold CBDC in a digital wallet on their cell phones could enable more unbanked consumers in the U.S. to have access to services now only provided through a traditional account at a bank. Among several of the CBDC pilots underway, there are some concerns that financial inclusion is not being as prioritized as it should be. Some financial authorities have raised the question if the unbanked population in the US would be interested in a Federal Reserve CBDC or whether there is a more efficient way to promote financial inclusion.^{xxix}

Illicit finance

CBDC models will need to mirror or improve on current controls and reporting standards, requiring CBDC systems, platforms, exchanges, and other services to have appropriate protections built into their technological and legal foundations.

Anti-money laundering and combating the financing of terrorism (AML/CFT) requirements are core policy considerations that may drive support for a CBDC. This will require an identification system for which options have been developed and actively discussed internationally.

Anonymity akin to cash is one of the major considerations of a CBDC in the US: it is not a preferred policy outcome for most US policymakers, but for users, it may be the desired outcome. Striking a balance between privacy and preventing illicit activity will be a critical design component for a successful CBDC.

Implications for the US on cross-border payments

According to the BIS, CBDCs have the potential to enhance the efficiency of cross-border payments as long as countries work together "through different degrees of integration and cooperation, ranging from basic compatibility with common standards to the establishment of international payment infrastructures."^{xxx} One example of cross-border central bank collaboration began in February 2021 when the People's Bank of China had joined central banks from Thailand, the United Arab Emirates, and Hong Kong to conduct a digital currency cross-border wholesale (i.e., bank-to-bank) payment project.^{xxxi}

Depending on factors such as the level and nature of international adoption, however, CBDCs face several unresolved macro-prudential questions in terms of cross-border payments. The macro-financial implications of cross-border CBDC include a potential increase in cross-border flows, potential financial stability risks and currency substitution, and potential impact to reserve currency configurations and backstops.^{xxxii}

Key unresolved regulatory issues and policy linkages

By design, the FRB as the nation's central bank would be the issuer of a CBDC. The main difference between CBDCs and other digital assets (such as stablecoins or Bitcoin) is that a CBDC is a direct claim on the Federal Reserve, and the others are not. Bitcoin (and other cryptocurrencies like Ethereum) is effectively a digital asset and is usually bought and sold as such. Stablecoins, while pegged to a central bank currency and backed by holdings denominated in that currency, are not a direct claim on the Federal Reserve and would still require an intermediary to support.

In recent Congressional hearings and other public forums, FRB officials have said they may seek legislative authority before formally developing a CBDC.^{xxxiv} Over the past few months, US policymakers have ramped up their focus on digital innovation and convened several discussions with bipartisan interest as they explore the potential benefits, costs, and logistics of creating a CBDC. Indeed, lawmakers from both parties said that maintaining the US dollar as the global reserve currency is critical reason to consider developing a CBDC in the US, and many cited China's digital yuan pilot as a potential geopolitical concern. In June 2021, the Senate Banking Committee held a hearing on "Building A Stronger Financial System: Opportunities of a Central Bank Digital Currency.^{xxxxv}

However, FRB officials are clear that research and policy considerations will be cautious and deliberate, and no decisions have yet been made.

In June 2021, the House Financial Services Committee task force on financial technology held its first hearing on CBDCs, "Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and

Financial Inclusion Implications of Central Bank Digital Currencies."xxxvi At the hearing, House Financial Services Chair Maxine Waters announced that her Committee's hearing would be "the first in a series of hearings on an especially important topic of digital assets and cryptocurrency."xxxvii She also announced the launch of a Digital Assets Working Group of Democratic Members "to engage with regulators and experts on this poorly understood and minimally regulated industry."xxxviii

In July 2021, the House Financial Services Committee hosted its second CBDC-related hearing, "The Promises and Perils of Central Bank Digital Currencies." Chair Waters noted that as Congress continues to explore the policy, law, and regulation surrounding digital assets, "it is important for the Federal Reserve to have powerful tools to achieve its mandate," including adopting a CBDC "as one potential tool."

A look ahead

The evolution of a CBDC could have profound ripple effects for the entire financial system, including the growing digital asset ecosystem. Evaluating the policy, legal and regulatory dimensions, and unresolved questions of CBDCs is an important part of understanding a quickly moving discussion that has attracted considerable attention.

This POV is the first part in a series by the Deloitte Center for Regulatory Strategy. Future pieces will explore other technology, risk, and policy considerations of CBDCs, provide a global comparison of selected CBDC pilots, and assess their impact to financial institutions and their operations.

Contact us:

Joan Cheney

Managing Director | Deloitte Risk & Financial Advisory Deloitte & Touche LLP

Richard Walker Principal Deloitte Consulting LL

Richard Rosenthal Senior Manager | Deloitte Risk & Advisory Deloitte & Touche LLP

Ken Lamar Independent Senior Advisor to Deloitte & Touche LLP

Peter Phelan Independent Senior Advisor to Deloitte & Touche LLP

Deloitte Center for Regulatory Strategy

Irena Gecas-McCarthy

FSI Director, Deloitte Center for Regulatory Strategy, Americas Principal | Deloitte Risk & Financial Advisory Deloitte & Touche LLP

Austin Tuell

Manager | Deloitte Risk & Financial Advisory Deloitte & Touche LLP

Kyle Cooke

Senior Consultant | Deloitte Risk & Financial Advisory Deloitte & Touche LLP

CENTER for REGULATORY STRATEGY AMERICAS

Endnotes

i.	Federal Reserve Bank of Boston (Boston Fed), " <u>The Federal Reserve Bank of Boston announces collaboration with MIT to research digital currency</u> " accessed on August 1, 2021.
ii.	House Financial Services Committee, "Memorandum: <u>"Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion</u> Implications of Central Bank Digital Currencies," accessed on August 1, 2021.
iii.	Board of Governors of the Federal Reserve System (FRB), "Federal Reserve Chair Jerome H. Powell outlines the Federal Reserve's response to technological advances driving rapid change in the global payments landscape," accessed on August 1, 2021.
iv.	House Financial Services Committee, "Memorandum: "Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion Implications of Central Bank Digital Currencies," accessed on August 1, 2021.
V.	lbid.
vi.	CNBC, "China's digital yuan could pose challenges to the U.S. dollar," accessed on August 1, 2021.
vii.	Please see Deloitte Luxembourg, "Are Central Bank Digital Currencies (CBDCs) the money of tomorrow?" accessed on August 1, 2021.
viii.	lbid.
ix.	Bank for International Settlements (BIS), "Ready, steady, go? - Results of the third BIS survey on central bank digital currency," accessed on August 1, 2021.
х.	lbid.
xi.	As opposed to truly decentralized cryptocurrencies like Bitcoin, stablecoins are generally pegged to a fiat currency like the US dollar.
xii.	House Financial Services Committee, "Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion Implications of Central Bank Digital Currencies," accessed on August 1, 2021.
xiii.	Ibid., and Dr. Neha Narula, "Written testimony before the US House of Representatives Committee on Financial Services Task Force on Financial Technology." accessed on August 1, 2021.
xiv.	FRB Governor Christopher J. Waller, "CBDC: A Solution in Search of a Problem?" accessed on August 1, 2021.
XV.	Reuters, "Fed's Powell: More important for U.S. to get digital currency right than be first," accessed on August 1, 2021.
xvi.	Senate Banking Committee, "The Semiannual Monetary Policy Report to the Congress," accessed on August 1, 2021.
xvii.	While recognizing the many CBDC developments taking place globally, this POV will have a US-focus.
xviii.	BIS, <u>"CBDCs: an opportunity for the monetary system,"</u> accessed on August 1, 2021.
xix.	Please see Deloitte Luxembourg, "Are Central Bank Digital Currencies (CBDCs) the money of tomorrow," accessed on August 1, 2021.
XX.	BIS, <u>"CBDCs: an opportunity for the monetary system,"</u> accessed on August 1, 2021
xxi.	Ibid.
xxii.	Ibid.
xxiii.	Ibid.
xxiv.	FRB Governor Lael Brainard, "Private Money and Central Bank Money as Payments Go Digital: an Update on CBDCs," accessed on August 1, 2021.
XXV.	Dr. Neha Narula, "Written testimony before the US House of Representatives Committee on Financial Services Task Force on Financial Technology," accessed on August 1, 2021.
xxvi.	Julia Friedlander, <u>"Testimony before the U.S. House of Representatives Committee on Financial Services Subcommittee on National Security, International</u> Development and Monetary Policy Regarding "The Promises and Perils of Central Bank Digital Currencies," accessed on August 1, 2021.
xxvii.	BIS, <u>"CBDCs: an opportunity for the monetary system,"</u> accessed on August 1, 2021.
xxviii.	Julia Friedlander, "Testimony before the U.S. House of Representatives Committee on Financial Services Subcommittee on National Security, International Development and Monetary Policy Regarding "The Promises and Perils of Central Bank Digital Currencies," accessed on August 1, 2021.
xxix.	FRB Governor Christopher J. Waller, "CBDC: A Solution in Search of a Problem?" accessed on August 1, 2021.
XXX.	BIS, <u>"Central bank digital currencies for cross-border payments,"</u> accessed on August 1, 2021.
xxxi.	lbid.
xxxii.	lbid.
xxxiii.	lbid.
xxxiv.	Reuters, "Fed officials express skepticism about a U.S. central bank digital currency," accessed on August 1, 2021.
XXXV.	Senate Banking Committee, "Building A Stronger Financial System: Opportunities of a Central Bank Digital Currency," accessed on August 1, 2021.
xxxvi.	House Financial Services Committee, "Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion Implications of Central Bank Digital Currencies," accessed on August 1, 2021.
xxxvii.	Ibid.
xxxviii.	Congresswoman Maxine Waters, "Waters Announces Digital Assets Working Group," accessed on August 1, 2021.
xxxix.	House Financial Services Committee, "The Promises and Perils of Central Bank Digital Currencies Subcommittee on National Security. International Development. and Monetary Policy," accessed on August 1, 2021.

xl. Congresswoman Maxine Waters, "Waters on Central Bank Digital Currencies: It Is Vital That Our Central Bank Has Powerful Tools to Achieve Its Mandate," accessed on August 1, 2021.

Deloitte.

This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional adviser. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

The services described herein are illustrative in nature and are intended to demonstrate our experience and capabilities in these areas; however, due to independence restrictions that may apply to audit clients (including affiliates) of Deloitte & Touche LLP, we may be unable to provide certain services based on individual facts and circumstances.

As used in this document, 'Deloitte' means Deloitte & Touche LLP, which provides audit, assurance, and risk and financial advisory services; Deloitte Consulting LLP, which provides strategy, operations, technology, systems, outsourcing and human capital consulting services. These entities are separate subsidiaries of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of our legal structure. Certain services may not be available to attest clients under the rules and regulations of public accounting.

Copyright © 2021 Deloitte Development LLC. All rights reserved.