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Digital Dollar Project
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Submitted via e-mail: feedback@digitaldollarproject.org

**Response of the Chamber of Digital Commerce to “The Digital Dollar Project:
Exploring a US CBDC”**

Dear Conveners of the Digital Dollar Project:

The Chamber of Digital Commerce (the “Chamber”) welcomes the opportunity to submit this letter for consideration by the Digital Dollar Project (the “Project”) with respect to its May 2020 white paper entitled, “The Digital Dollar Project: Exploring a US CBDC” (the “White Paper”).¹

The Chamber is the world’s leading blockchain trade association. Our mission is to promote the acceptance and use of digital assets and blockchain technology, and we are supported by a diverse membership that represents the blockchain industry globally. Through education, advocacy, and close coordination with policy makers, regulatory agencies, and industry across various jurisdictions, our goal is to develop a pro-growth legal environment that fosters innovation, job creation, and investment with appropriate safety and soundness protections. We represent the world’s leading companies in the blockchain ecosystem, including leading-edge software companies, global IT consultancies, financial institutions, insurance companies, law firms, and investment firms. The Chamber and its Members have a significant interest in any potential U.S. central bank-issued digital currency (“CBDC”) which would likely play a key role in the growth and development of the blockchain and distributed ledger technology (“DLT”) sector in the United States.

The White Paper states that the purpose of the Project is to “encourage research and public discussion on the potential advantages of a tokenized dollar, convene private sector thought leaders and actors, and propose possible models to support the public

¹ The Digital Dollar Project, *The Digital Dollar Project: Exploring a US CBDC* (May 28, 2020), <https://www.digitaldollarproject.org/exploring-a-us-cbdc>. Hereinafter, the “White Paper.”

sector as it considers development, testing, and adoption of a CBDC.” We are publishing this letter in the spirit of that feedback process.

First and foremost, we would like to commend the partners behind the Project, the Digital Dollar Foundation and Accenture, and the others working on this effort (collectively, the “Project Participants”), for the significant contribution represented by the White Paper. The Chamber shares the Project Participants’ view that developing a U.S. digital dollar across a range of use cases is a “critical and prudent” initiative for the United States. Given the myriad of technological, economic, and policy issues raised by developing a U.S. CBDC,² we also share the view that the process of seriously considering these issues and proposing practical solutions must begin now.³ We hope this letter contributes to that process.

Executive Summary

This letter is divided into four main sections:

1. The potential benefits and challenges of creating a U.S. CBDC

We begin with our perspective on the potential benefits of a U.S. CBDC. These benefits form the basis of our support for the Digital Dollar Project and its work to consider the development of a U.S. CBDC. We explore the way in which a U.S. CBDC could facilitate advances in retail, wholesale, and international payments in the private sector, as well as encouraging the use of blockchain and DLT in traditional capital markets and finance. These benefits can best be achieved by ensuring that a U.S. CBDC is tailored to the current two-tier banking system and role of correspondent banks in the international markets. Further, the features of a U.S. CBDC should be designed to strengthen the U.S. dollar and maintain, or even expand, its role as the reserve currency for global transactions. In addition, we note the importance of supporting greater financial inclusion but also acknowledge that this potential benefit of a U.S. CBDC should be analyzed more carefully to ensure this objective will actually be met. The programmatic features of a U.S. CBDC could enable certain transparency and regulatory objectives too. Given the complexity that the adoption of such a system would have on the entire financial sector, the process of exploring implementation of a U.S. CBDC will require a meaningful cost-benefit analysis to determine those areas that stand to benefit the most from such an advancement and how those benefits will be achieved. Given the wide range of expertise across our Membership, we also recognize there will be several important challenges to successfully implementing a U.S. CBDC. These concerns include the potential of foreseeable and unforeseeable adverse impacts on existing market participants without corresponding gains from new

² Throughout this paper we use the terms “U.S. CBDC” and “digital dollar” interchangeably as they are used in the White Paper.

³ According to one source, the subject of CBDCs will be raised at the next G-7 meeting, making this work particularly timely. See *Central Bank Digital Currencies to Be Raised at Next G-7 Summit*, THE MAINICHI SHIMBUN (July 21, 2020), <https://mainichi.jp/english/articles/20200720/p2g/00m/0bu/064000c>.

business models, the impact of a U.S. CBDC on the privacy of users, and the realistic access of underserved communities to the potential benefits.

2. Technological underpinnings

This section looks at a range of issues such as the pros and cons of using open network architecture based on blockchain technology versus a permissioned or fully closed system, technical issues relating to the wallet software that would store a U.S. CBDC for users, and the potential interconnections between the technology used for a digital dollar and that which would support user “decentralized identity.”

3. Mechanism design considerations

There follows a review of what we see as the critical mechanism design considerations that will need to be considered in developing a U.S. CBDC. This section is informed in large part by the potential benefits and challenges of a U.S. CBDC set out in the first section and considers how data applicable to the use of a digital dollar will be tracked, how retail adoption of a digital dollar can be encouraged, and how our two-tiered banking system will be preserved.

4. Recommendations for next steps

Finally, we conclude with some recommendations for next steps in progressing this important initiative and encourage critical review of these factors in even more depth, as well as ongoing consultation with industry – including our Members who are experts at considering policy, technology, design, and financial impacts of DLT.⁴ The Chamber and our Members look forward to continuing this important dialogue with the Project Participants and with the policy makers, regulators, advocacy groups, and private sector entities whose support will be needed to make any U.S. CBDC a reality. We encourage the Project Participants’ continued outreach and engagement with the industry to achieve mutually beneficial outcomes.

I. Potential Benefits and Challenges of Creating a U.S. CBDC

The Chamber strongly supports the important work of research and development for any potential U.S. CBDC, recognizing the tremendous public and private sector resources needed to bring a digital dollar to the point of implementation. In particular,

⁴ This letter does not focus on the important macroeconomic implications of creating a U.S. CBDC. However, we support the work on the economics of CBDCs being done by the U.S. Federal Reserve System and other central banks and research institutions around the world, as well as at many important multi-lateral organizations, including the International Monetary Fund, the Bank for International Settlements, and others. In addition, this letter focuses on the potential benefits of the United States implementing a digital dollar; however, support for this initiative is independent of the view the Chamber or our Members may have on the parallel benefits that bitcoin or other virtual currencies may have for performing some or all of the roles of a digital dollar.

we appreciate the critical distinction made in the White Paper between a “tokenized” U.S. CBDC and an account-based digital dollar, and suggest a cost-benefit analysis based on the objectives and use cases to target to achieve the most beneficial outcome.⁵ Below, we look at the factors that we see as providing the greatest benefits to the United States and its residents from the implementation of a U.S. CBDC.⁶ We follow with some important concerns that we believe would need to be addressed for such an implementation to be considered successful.

a. Benefits of Implementing a Digital Dollar

i. Facilitating retail, wholesale, and international payments in private sector

Frequently cited in the White Paper and elsewhere as one of the most important benefits of a U.S. CBDC is the potential to modernize the payments sector and to ensure that the U.S. dollar remains the bedrock of the global payments infrastructure. We appreciate that the White Paper notes that a U.S. CBDC will “future proof the next era of currency. It is not simply an activity to unlock incremental benefits such as cheaper and faster payments.” It is widely recognized that many individuals and businesses in the United States and across the developed world already have access to excellent, reliable, and time-tested payments infrastructure. However, as with physical infrastructure, even well-functioning systems developed to suit the needs of previous generations will eventually need to be upgraded.⁷ The White Paper correctly focuses on this aspect of a U.S. CBDC, and we strongly support the perspective that modernization of payments infrastructure is important. As noted by the White Paper, “Rather than being a defensive measure, tokenization of the U.S. dollar should be viewed as a proactive opportunity to enhance the technological infrastructure

⁵ White Paper, *supra* note 1 at 6. Given the focus of the White Paper, references herein to a “U.S. CBDC” or “digital dollar” are to a tokenized version that “operates alongside existing monies; is primarily distributed through the existing two-tiered architecture of commercial banks and regulated money transmitters; and is recorded on new transactional infrastructure, potentially informed by distributed ledger technology.” *Id.* However, a final decision on this critical question should only be undertaken after careful cost-benefit analysis and unbiased trial programs.

⁶ See Tommaso Mancini Griffoli et al., *Casting Light on Central Bank Digital Currency*, IMF (Nov. 12, 2018), <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2018/11/13/Casting-Light-on-Central-Bank-Digital-Currencies-46233>. See also, *CBDC Research Report Project Inthanon-LionRock*, (Jan. 22, 2020), <https://www.hkma.gov.hk/media/eng/doc/key-information/speeches/s20200122e1.pdf>; and *Payments System Board Update: August 2020 Meeting*, (Aug. 21, 2020), <https://www.rba.gov.au/media-releases/2020/mr-20-19.html>.

⁷ Staff of the Federal Reserve Board recently issued a paper that looked at the potential benefit that a U.S. CBDC could provide to existing payment mechanisms such as cash and RTGS systems. A CBDC has the potential to be an improvement over both existing modes of payment; however, central banks will need to decide whether a CBDC is a mere enhancement of existing payment mechanisms or a more revolutionary development, Paul Wong and Jesse Leigh Maniff, *Comparing Means of Payment: What Role for a Central Bank Digital Currency?* (Aug. 13, 2020), <https://www.federalreserve.gov/econres/notes/feds-notes/comparing-means-of-payment-what-role-for-a-central-bank-digital-currency-20200813.htm>.

underpinning our currency to future-proof its role in the global economy.”⁸ Given the pervasive implications of a U.S. CBDC, development and adoption may be dependent on the concurrent development of a number of DLT-based use cases for a digital dollar.

We believe it will be important for the Project to continue to highlight as many specific examples as possible of products and services that would benefit from modernized payments infrastructure.

Similar to a smartphone company highlighting the need for users to invest in an expensive equipment upgrade by demonstrating the new software and applications the new device will enable, advocates of a U.S. CBDC must make the case by painting a picture of the types of innovations in store for users of a digital dollar. This includes educating users on the benefits of a potential retail U.S. CBDC, compared with physical cash and existing payments methods, and why and how a consumer may want to hold and use it. The White Paper mentions a consumer wallet infrastructure that enables custody and recoverability of digital dollars (while cautioning that such a feature could also introduce moral hazard risk and increased incentive to hold large sums of CBDC outside of the banking system). Also cited is the ability to settle securities transactions against “central bank money anywhere” and the use of digital dollars as part of foreign exchange transactions (although we acknowledge that this is not essential because cash settlement is still possible outside of the Central Depository System).

A U.S. CBDC could also form the underpinnings of decentralized business and personal insurance products, particularly those with parametric payment thresholds, such as so-called “catastrophe bonds” that provide a payout should, for example, wind speed in an identified area exceed a pre-designated threshold for a period of time.

In addition to a U.S. CBDC expediting the settlement of securities transactions generally, a digital dollar could open up the U.S. securities markets to more direct retail activities by lowering transaction settlement costs, particularly where small retail transactions are involved – perhaps even paving the way for experiments with the use of an (appropriately supervised) decentralized exchange for traditional securities. Digital dollars can also underpin new micro-payment services where business models could develop around platforms able to collect very large numbers of payments of less than \$0.01.

The White Paper acknowledges that “[c]ross-border payments have historically been slower, more complex, less transparent, and more expensive than domestic payments.”⁹ One study found that settling cross-border interbank transactions using a CBDC could reduce transaction costs by 51%,¹⁰ although CBDCs could necessitate high fixed initial incremental costs for technology and implementation. While we agree that a U.S. CBDC could also help to facilitate more cost-efficient international payments

⁸ White Paper, *supra* note 1 at 28.

⁹ White Paper, *supra* note 1 at 42.

¹⁰ C.L. van Ginneken, *Settlement Of Cross-Border Transactions Through Central Bank Digital Currency (CBDC): Analysis From A Risk Management Perspective* (June 2019), <https://essay.utwente.nl/78027/>.

in the long term, achieving this outcome is not just a technological issue. As Agustín Carstens, General Manager of the Bank for International Settlements (“BIS”), observed late last year,

There is an urgent need to improve the current system of cross-border payments that has lagged behind the progress in domestic systems. This is not only a matter of technology, but also of coordinating standards and practices across jurisdictions. Central banks and public authorities should respond to users’ justified demands for a more efficient financial system.¹¹

The International Monetary Fund (“IMF”) asks important questions on this theme:

[I]f CBDC[s] were used for cross-border transactions, how might central banks be required to cooperate? Would they absorb some of the functions of correspondent banks and thus take on additional liquidity, credit, and foreign exchange rate risk, or might tokens be created for cross-border payments among particular central banks, commercial banks, or firms? These are deep and difficult questions with far reaching implications that deserve further research.¹²

We encourage more constructive discussion on how these complex international coordination challenges can be addressed.¹³

In addition, international payments have traditionally been handled primarily through correspondent relationships among private commercial banks. Implementation of a U.S. CBDC along with other jurisdictions’ CBDCs raises questions as to what will become of these important traditional correspondent banking relationships which often provide a range of services, particularly for wholesale customers. Care must be taken so that using a CBDC in the cross-border context does not create unanticipated adverse impacts on competition, traditional financial system utility, global economies, financial crime, or the availability of products and services demanded by individuals and businesses in a cross-border context, for example.

¹¹ Agustín Carstens, *The Changing Colour of Money - New Directions for Payment Systems, Currencies*, BIS (Nov. 13, 2019), <https://www.bis.org/speeches/sp191113.htm>.

¹² John Kiff et al., *A Survey of Research on Retail Central Bank Digital Currency*, IMF (June 26, 2020), <https://www.imf.org/en/Publications/WP/Issues/2020/06/26/A-Survey-of-Research-on-Retail-Central-Bank-Digital-Currency-49517>.

¹³ A 2019 survey by the BIS noted that central banks are increasingly collaborating with each other to carry out proof-of-concept work such as cross-border payment and securities settlement arrangements. Collaborations highlighted by the BIS include Project Stella by the ECB and the Bank of Japan as well as a joint project by the Bank of Canada, the Monetary Authority of Singapore, and the Bank of England. Christian Barontini and Henry Holden, *Proceeding with Caution – A Survey on Central Bank Digital Currency*, 8 (2019), <https://www.bis.org/publ/bppdf/bispap101.pdf>.

As the Project moves forward, we urge the Project Participants to expand upon the benefits of a digital dollar as a payments tool to businesses and individuals in the real economy set out in the White Paper to further build support for this initiative.

- ii. Benefits for use of blockchain and DLT in traditional capital markets and finance

One stated benefit of a token-based U.S. CBDC is “always on” availability. Foreign exchange, equity, debt, and derivatives markets currently are not “always on,” and a U.S. CBDC could help to facilitate 24*7*365 availability for payment vs. payment or delivery vs. payment settlement and the extension of the operating hours of the financial markets, as demand indicates. On the other hand, policy makers will have to think through secondary effects that may impact some basic tenets of traditional capital markets and finance. For example, the concept of “overnight interest” may need to be revisited, with measures adopted against the risk of “batch process arbitrage,” *e.g.*, an industry-agreed timeframe for interest calculations will likely be needed. This serves to illustrate that modernizing payment systems needs to be pursued holistically and judiciously by policy makers charged with the safety and soundness of the global financial system to avoid unintended adverse consequences.

The White Paper recognizes that “[c]entral bank money plays a special role, particularly in wholesale payments and foremost in securities trading.”¹⁴ We agree. The White Paper considers three models of securities and payment settlement – net vs. gross in each case, and concludes,

Overall, while innovation in the securities settlement space can occur with other forms of payment, we believe that CBDC could provide benefits that exceed the current settlement mechanisms. Settlement in a form other than central bank money would be a step backward that could introduce systemic risk in the securities and financial system.¹⁵

This point needs to be further expanded. Although progress continues to be made in moving our securities infrastructure into an all-digital future, the likelihood is that implementing a U.S. CBDC may rapidly accelerate this transition. Unlike retail or cross-border uses of digital dollars, which will require significant and granular steps to be taken by retail users and merchants, or challenging coordination issues among central banks for the use of CBDCs in the international context, availability of a digital dollar could allow the market infrastructure in the United States for securities transactions and wholesale funding transactions (*e.g.*, repo agreements) to migrate to an all-digital format, as market demand increases. The White Paper states that the “Model 3 system could provide the payment leg for final settlement. This could again provide increased

¹⁴ White Paper, *supra* note 1 at 26.

¹⁵ *Id.* at 41.

accessibility, easier reconciliation, and spur innovation.”¹⁶ Near real-time, intraday settlement of funding transactions through the use of U.S. CBDC is one part of that potential innovation, reducing settlement and credit risk and providing an alternative settlement system for parties that choose to adopt it. The same may well also be true for commodities and derivatives markets. We strongly encourage the Project Participants to continue to articulate the benefits for participants in the securities and commodities markets in more detail as those would directly impact virtually all larger businesses in the United States.

iii. Maintaining the U.S. Dollar’s status as the world’s reserve currency

The White Paper strongly sets out the case that a pathway toward digital representation is critical to preserving the U.S. dollar as the world’s reserve currency, noting that “[a]s was the case in the analog era, for the U.S. dollar to remain a reserve currency, a U.S. CBDC must carry longstanding U.S. values of economic stability, individual liberty and privacy, free enterprise, and the rule of law into the digital age.”¹⁷ Our Members strongly support this position and believe one of the most important aspects of the Project will be to make this case convincingly to U.S. policy makers. Failure of the U.S. dollar to compete effectively in the new world of digital sovereign currencies could be detrimental to the overall stature of the United States in the world community.¹⁸

Of course, the United States is not operating alone in the race to develop a CBDC. Many other countries are doing the same (and may well be ahead of the United States, although this is difficult to discern based only on published reports). Recently, staff of the BIS found 17 separate projects or reports published before February 19, 2020 (not including wholesale CBDCs or cross-border payment projects that do not involve a CBDC).¹⁹ Of particular note are the efforts in this area by the Bank of England²⁰ and the People’s Bank of China.²¹ The issuance of a CBDC in any developed economy will

¹⁶ *Id.*

¹⁷ *Id.* at 8.

¹⁸ *Id.* at 32.

¹⁹ Raphael Auer, Giulio Cornelli, and Jon Frost, *Taking stock: Ongoing Retail CBDC Projects*, BIS Quarterly Review 85, 97 (March 2020), https://www.bis.org/publ/qtrpdf/r_qt2003.pdf.

²⁰ See Bank of England, *Discussion Paper: Central Bank Digital Currency - Opportunities, challenges and design*, (March 2020), <https://www.bankofengland.co.uk/-/media/boe/files/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design.pdf>.

²¹ See *China Aims to Launch The World’s First Official Digital Currency*, THE ECONOMIST (Apr. 23, 2020), <https://www.economist.com/finance-and-economics/2020/04/23/china-aims-to-launch-the-worlds-first-official-digital-currency>; see also, Michael Del Castillo, *Bitcoin And Other ‘Crypto-Assets’ Excluded From Central Bank Experiments*, FORBES (July 20, 2020), <https://www.forbes.com/sites/michaeldelcastillo/2020/07/20/cryptocurrency-excluded-from-french-central-bank-experiments/#1d61fe0e3960> (noting that the People’s Bank of China “has taken a giant first-mover advantage in the space, starting its CBDC experiments years ago, and currently testing a working implementation. If successful, one side-effect of CBDCs could be borderless transactions, possibly giving people the choice to store Chinese Renminbi in addition to, or instead of dollars, as a global reserve currency.”).

likely set off a furious “arms race” among jurisdictions to ensure that their currencies are not left behind. The time for research and development of a U.S. CBDC is now, before we are forced to play catch-up with other jurisdictions.

One other observation we believe may be useful to the Project Participants in helping policy makers appreciate the importance of the United States leading in the development of the technology both underpinning and utilizing a U.S. CBDC is to analogize to the birth of the Internet. Although important contributions were made in the early days of the Internet from engineers and developers from around the world, the open and inviting environment in the United States allowed many Internet companies based here to thrive and, ultimately, become some of the world’s most valuable businesses. In addition to the many macroeconomic benefits touched on by the White Paper to the U.S. dollar maintaining its role as the world’s reserve currency in a fully digital world, policy makers should also appreciate that having the United States lead in the area of CBDCs will almost certainly have significant benefits for private sector companies based here.

iv. Financial inclusion and access

One of most frequently touted benefits of implementing a digital dollar is enhanced financial inclusion. There are geographic and socio-economic segments in the United States where access to traditional financial services are limited. The White Paper specifically observes that a digital dollar could expand the ability of un- or underbanked populations to access digital financial services and transact on e-commerce platforms. Traditional financial institutions also recognize the need to offer services to populations that have been left out of the formal banking system. Several large U.S. banks have recently expanded digital-only and no-fee deposit accounts to help address this persistent gap. The current pandemic, coupled with civil unrest, has fueled new thinking and spurred banks to come up with creative solutions to go beyond standard offerings. A U.S. CBDC could further facilitate these efforts by providing a new set of payment tools on which to build new product offerings for underserved markets.

While not directly analogous to the United States, the “Sand Dollar” CBDC project implemented by the Central Bank of the Bahamas is looking at this objective, finding that “[t]he potential to improve financial inclusion, especially for remote communities, is significant. More centralized and portable KYC data, coupled with digital channels for both deposits and withdrawals, would permit banks to provide basic deposit services remotely, and to rely on the digital infrastructure to extend credit.”²²

While this is a laudable objective, caution is also merited in consideration of “inclusion” as a primary benefit of adoption of a CBDC in the United States. For example, the White Paper notes that a 2017 Federal Deposit Insurance Corporation (“FDIC”) survey found that roughly 14 million American adults lack a bank account. However, the

²² Central Bank of the Bahamas, *Project Sand Dollar: A Bahamas Payments System Modernisation Initiative* (Dec. 2019), <https://www.centralbankbahamas.com/download/022598600.pdf>.

citation for this statistic comes from an article entitled “U.S. ‘Unbanked’ Population Continues to Fall.”²³

The Chamber strongly supports initiatives that expand access to the wider financial system for more Americans. While much needs to be learned about the specific resources that would benefit this population, this lack of access often results from being undocumented or otherwise not being in a socio-economic position to utilize tools such as smartphones with high-speed Internet access, which would be equal hindrances to use of a digital dollar. They also still face the challenge of obtaining appropriate identity documentation to satisfy current KYC requirements. Financial inclusion has the potential to be a powerful policy benefit for adoption of a U.S. CBDC, but we encourage the Project Participants to delve more deeply into how a digital dollar, in addition to decentralized identity solutions, would specifically benefit those who make up the majority of the unbanked population in the United States, while considering existing, more traditional financial products that may be underutilized and why.

v. Programmatic features and transparency

The White Paper recognizes that “[o]ne of the exciting innovations of a tokenized CBDC is the concept of “programmable” money.”²⁴ We agree that “programmable money” is a powerful concept, while recognizing that market participants are already building such tools using open-source blockchain networks. The benefits of having a U.S. CBDC in tokenized form are most apparent when the digital currency is utilized in DLT or blockchain based systems.²⁵ “Programmable” central bank money could enable a wide range of retail, wholesale, and international payment services and products beyond the dollar’s current capabilities but is possible or practicable using existing tools. Among business users, digital dollars could facilitate the development of highly deterministic escrow arrangements through which native, blockchain-based automation (frequently called “smart contracts”) could facilitate secure trading relationships between commercial parties that have not formed a relationship of trust.

From a compliance viewpoint, rules could be implemented that would provide the Financial Crimes Enforcement Network of the U.S. Department of the Treasury (“FinCEN”) with real-time reporting of large transactions (say, over \$10,000) and transactions to or from wallet addresses appropriately identified as associated with unlawful activities or sanctioned persons or businesses. This could reduce the cost of overseeing compliance with the Bank Secrecy Act and promote national security.

Besides the programmatic potential of digital dollars, the advantages of a U.S. CBDC also shine in private transactions. For example, businesses may want to promote

²³ Allison Prang and Yuka Hayashi, *U.S. ‘Unbanked’ Population Continues to Fall*, WALL ST. J. (Oct. 23, 2018), <https://www.wsj.com/articles/u-s-unbanked-population-continues-to-fall-1540316543>.

²⁴ White Paper, *supra* note 1 at 21.

²⁵ See, e.g., *id.*, at 18 (stating that “DLTs function by implementing synchronization rules whereby multiple machines storing copies of the ledger achieve “consensus” on transaction ordering. Key to this model is its ability to automate—and thereby enhance the efficiency of—transactions.”).

transparency which allows investors that hold a “view only” private key to monitor revenue as it is received. This could be powerful in the context of securities that offer investors a share of a business’s revenue.

As with new and exciting payment-related features, we support the Project’s efforts to iterate on the programmatic and transparency benefits of a U.S. CBDC to build interest and support for the initiative among a range of stakeholders.

vi. Cost and health concerns with issuing paper money

A number of practical concerns also support the continued exploration of the development of a U.S. CBDC. First, the cost to the federal government of issuing and handling paper money and coins can be expensive. The White Paper alludes to cost savings arising from introducing the digital dollar, including reducing the cost of mobile payment transfers. We encourage the Project Participants and other interested parties to conduct detailed (and peer-reviewed) studies demonstrating the long-term cost savings that may be obtained from implementing a digital dollar. These studies should not only drill down on potential savings in specific sectors (such as payments) – they should also be conducted longitudinally across the entire economy and consider any potential for adverse impacts on existing services providers in the United States. Second, the issuance of a potential U.S. CBDC would further enable contactless payments, promoting health safety considerations during the COVID-19 pandemic.

vii. Encouraging growth of the DeFi ecosystem

One of the much-discussed developments of the last 12 to 18 months in financial innovation has been the emergence of “decentralized finance” (or “DeFi”). DeFi is still in its nascency but has attracted a high level of attention in the blockchain community.²⁶ One writer defines DeFi as an “open financial economy based on open protocols that are interoperable, programmable, and composable.”²⁷ These open protocols are generally built using blockchain technology and are operated in a wholly or partially decentralized manner.²⁸ Currently, these protocols use a variety of stablecoins as substitutes for the U.S. dollar to accommodate users wishing to transact in dollars.

Depending on how it is implemented, a natively digital dollar has the potential to enhance the growth of the DeFi ecosystem by providing protocols with actual dollars for settlement of a range of transactions. The growth of DeFi may also be enhanced by a more widespread adoption of the digital wallets (and decentralized identity solutions

²⁶ See, e.g., Matt Hougan, *Why Ethereum Has Value - The Opportunity In Programmable Money & ‘DeFi’*, FORBES (July 13, 2020), <https://www.forbes.com/sites/matthougan/2020/07/13/why-ethereum-has-value-the-opportunity-in-programmable-money--defi/#614e26a54818>.

²⁷ Mason Nystrom, *2019 Was The Year of DeFi (and Why 2020 Will Be Too)*, CONSENSYS BLOG (Dec. 5, 2019), <https://consensys.net/blog/news/2019-was-the-year-of-defi-and-why-2020-will-be-too/>.

²⁸ We are aware that many platforms currently offering “DeFi” solutions to users are not yet fully “decentralized.” The question of how “decentralization” should be measured or the point at which a platform should be considered “sufficiently decentralized” is outside the scope of this response.

discussed below) needed by consumers to utilize digital dollars, although inherent risks must also be considered. The White Paper does not address how the DeFi community would be affected by introduction of a U.S. CBDC. Given the continued growth of decentralized finance, we would encourage the Project Participants to look more closely at this aspect of digital dollar implementation and consider ways policy makers can examine the use of digital dollars in DeFi through tools such as regulatory sandboxes, pilots, and other mechanisms.

b. Challenges in Implementing a Digital Dollar

Despite the many potential benefits that could come from implementing a U.S. CBDC, our Members believe certain challenges must be addressed to move forward safely with a digital dollar in a way that does not inadvertently expose our financial system to an unsupportable level of risk. Additionally, the implementation of a U.S. CBDC would require outreach to educate users about the digital dollar and how it differs from other payments methods. The costs and operational aspects of this should be taken into account as work on the Project continues.

i. Impact on financial systems and existing market participants

One of our main concerns around the adoption of a U.S. CBDC is the potential for unintended adverse consequences on existing market participants. The nation's current financial system is highly complex with many types of entities operating in a closely interconnected ecosystem that includes commercial banks, investment banks, trust companies, credit unions, savings banks, payment service providers, credit and debit card network operators, and many others.

In particular, private credit creation is dependent on private liabilities, namely commercial bank money. Policy makers should carefully consider how to preserve the provision of private extensions of credit and credit markets, which fuel economies around the world. A U.S. CBDC must not completely replace private liabilities with public (central bank) liabilities that would extinguish private credit creation, and it must not increase the role and dominance of the central bank in the financial system and the economy as a whole. Policy makers may need to make design choices that will preserve the credit function and its important societal benefits, which have been recently illustrated by the global response to COVID-19.

In addition, policy makers should carefully consider the potential impact of a retail U.S. CBDC on the thriving private markets for digital payments, the wider repercussions for the financial system (such as potential concentration of deposits at the central bank and procyclicality effects in case of stress in the system), and the increased balance sheet of the Federal Reserve System and its role on financial intermediation.

Our Members understand that technological and regulatory change is a constant and that each business must monitor the changing landscape and adapt its model accordingly. We believe that the roadmap to a digital dollar will require finding relevant

use cases where a U.S. CBDC would be compelling to use and educating market participants about how it would function and providing advance notice so they can prepare.

Besides the potential impact of a U.S. CBDC on existing market participants, many of our Members operate at the cutting edge of finance and technology. This includes digital asset exchanges, stablecoin providers, permissioned DLT network creators, and many others. Some of these types of entities may be vulnerable to changes in the U.S. payments ecosystem, particularly businesses that provide U.S. dollar-based stablecoin services. Although the existence of businesses built around the issuance of stablecoins should not hinder work on developing a U.S. CBDC, we do believe that a U.S. CBDC should be designed to be complementary to other forms of digital money that have already been developed.

ii. User privacy, data access/tracking, and AML/KYC

With the implementation of a U.S. CBDC, we believe that it is important to consider how privacy rights protected by the Fourth Amendment will be impacted. Maintaining the privacy that users expect when using physical cash and current account-based electronic payments infrastructure and preventing the government from accessing an inordinate amount of personal information is an important consideration. In this context, the BIS defines privacy as:

[T]he consumer's data are used only in steps strictly necessary for the specific purpose of determining whether a transaction is lawful and, if this [is] [sic] the case, executing it. 'By default' implies that privacy is ensured without requiring any intervention by the user.²⁹

The BIS formulation of privacy involves more data tracking which would enhance AML-related monitoring. This would be a benefit for law enforcement, especially when considering a digital bearer instrument, but could significantly impact privacy. The White Paper identifies user privacy as a core design principle, stating that "[t]he digital dollar will support a balance between individual privacy rights and necessary compliance and regulatory processes, decided upon by policy makers and ultimately reflecting the jurisprudence around the Fourth Amendment."³⁰

Although general agreement with this principle should be reasonably straightforward, the challenge, we recognize, will be in the implementation. Besides recognizing the important role the prohibition against unreasonable searches and seizures the U.S. Constitution's Fourth Amendment will play in any discussion of privacy, when it comes to a U.S. CBDC, our Members believe that additional work will need to be done on this front before a digital dollar will be ready for widespread use. Any potential U.S. CBDC should carefully balance law enforcement and compliance objectives with user privacy.

²⁹ Auer, Cornelli, and Frost, *supra* note 18.

³⁰ White Paper, *supra* note 1 at 6.

This may involve establishing a legal framework, including implementing a special warrant process, to access certain information from digital dollar transactions. The importance of the U.S. CBDC goes far beyond the success of the U.S. CBDC, as this proposed digital currency will serve as a model for other locations that do not have the Fourth Amendment jurisprudence that we have in the United States.

This theme has been addressed by other central banks as well. For example, in 2019, staff of the Bank of Canada observed that “the failure of individuals to preserve their privacy in payments by using privacy-enhancing techniques, such as cash, can lead to socially suboptimal outcomes.”³¹ Building on this observation, a more recent Bank of Canada report made a number of more detailed recommendations including that:

- There are many cryptographic techniques and operational arrangements for a fine-grained privacy design. These demand knowledge of the detailed requirements around privacy and disclosure.
- The Bank could engineer a CBDC system with higher levels of privacy than commercial products can offer—but with trade-offs. Some combinations of requirements will not be feasible or may lead to high operational costs and excessive complexity and risk. Also, the user’s overall privacy will depend on factors such as user behaviour and the privacy policies of other entities in the CBDC ecosystem.
- Techniques to achieve cash-like privacy are immature. They have limited deployments, none of which comply with know-your-customer (KYC) and anti-money laundering (AML) regulations. Their risks include hidden vulnerabilities, a lack of scalability, and complicated operations.
- Maintaining privacy and complying with regulations (the latter which requires disclosure of information) present a dichotomy for a CBDC. This is further complicated by the need for proactive disclosure to prevent fraud.
- Public trust in the privacy design the Bank enacts could be enhanced through third-party reviews of CBDC architecture and operations.³²

We believe that these are highly valuable observations which take on even greater weight coming from a well-respected central bank. These recommendations can serve

³¹ See Rodney J. Garratt and Maarten R. C. van Oordt, *Privacy as a Public Good: A Case for Electronic Cash* (July 2019), <https://www.bankofcanada.ca/wp-content/uploads/2019/07/swp2019-24.pdf>.

³² Sriram Darbha and Rakesh Arora, *Privacy in CBDC Technology* (June 2020), <https://www.bankofcanada.ca/2020/06/staff-analytical-note-2020-9/>.

as the building blocks for more U.S.-centric privacy recommendations to be developed by the Project Participants.

II. Technological Approach to Implementing a Digital Dollar

Given the breadth of experience of our Members, this topic can benefit from significant industry engagement. In this section, we explore the technological considerations essential to successfully implementing a U.S. CBDC. We begin by examining the use of public versus “permissioned” network infrastructure and potential hybrid approaches that could be “best of both worlds” solutions. We also consider the technology that would support user wallets³³ that would hold digital dollars, including the benefits of private sector competition. Finally, we conclude with a brief look at the interplay between the technology that would underlie a U.S. CBDC and that which would support user “decentralized identity.” Ultimately, the anticipated use cases for a U.S. CBDC will be an important factor in these decisions.

a. Public versus Permissioned Infrastructure

We recognize that both the underlying architectural choices that must be made when considering how to build the infrastructure for a U.S. CBDC, as well as the manner in which these choices are implemented, will be among the most important decisions in the process of creating a digital dollar. We believe that, in the long run, a more open architecture built using open source code wherever possible will provide the most robust and threat-resistant underpinning for a U.S. CBDC. Ideally, this would include an open network developed in conjunction with private sector input.³⁴

At the same time, given the high level of sensitivity to the potential for even the perception of interference in the U.S. money supply from those with adverse interests, we understand that those at the Federal Reserve and elsewhere responsible for the development of a U.S. CBDC will want to be extremely careful when looking at private sector input and open architecture. Accordingly, we would concur with the approach taken in the White Paper suggesting incremental pilots.³⁵ These pilots can be used to

³³ The White Paper acknowledges the technological components of implementation to modernize the payments sector, which can be relied upon to incorporate the digital dollar through incremental steps. This should be reviewed from a technology perspective to determine what might be most globally feasible, controlled, and adoptable.

³⁴ The Chamber and its Members can provide important input into the development process of a U.S. CBDC whenever it may be helpful or relevant. In addition, the BIS recently surveyed the work of various central banks with active CBDC projects and found that only one project focused on a conventional technology, whereas five were using DLT. However, this same report also noted that the reported experience with DLT had not always been encouraging. For example, the BIS report noted that Sveriges Riksbank found in 2018 that the DLT used suffered “from inadequate performance and scalability” and concerns of other central banks were also identified. Auer, Cornelli, and Frost, *supra* note 18. Given the pace at which blockchain and distributed ledger technologies are developing, we urge the Project Participants to continue their focus on this area and advocate for the important benefits that a tokenized digital dollar tracked using a DLT-like system can bring to a U.S. CBDC.

³⁵ See, e.g., White Paper, *supra* note 1 at 36.

test not only various use cases but also different technology approaches. For example, a series of trials using very small dollar amounts (say, not more than \$100 per trial user) could be conducted in a very limited geographic area (with, say, not more than 1,000 trial users participating over a two- to three-month trial period). These trials could test various architectural approaches and provide learnings as the development process progresses.

We agree with the approach set out in the White Paper to foster a public-private partnership in the development of a U.S. CBDC. The Federal government routinely works with private contractors in some of the most security-sensitive aspects of our defense sector.³⁶ The involvement of appropriately vetted, U.S. owned and operated private sector participants with experience utilizing blockchain and DLT would not only promote American industry, it would also bring needed innovative thinking to this critical project. We urge the Project Participants to continue to advocate strongly for private sector involvement in the development of a U.S. CBDC (and related technologies, such as wallet software).

b. User Wallets and Loss/Recovery Issues

The White Paper properly focuses on the wallet software that would allow users of digital dollars to maintain and spend their digital currency. The White Paper distinguishes between hosted digital wallets, which would require a regulated intermediary to provide the hosting service, and non-hosted wallets that could also custody U.S. CBDC. A benefit of non-hosted wallets is that they would not need to be managed by a regulated intermediary. We recognize that many Americans may find transitioning to use of a digital dollar easier if they have access to a hosted wallet provided by a regulated entity that can offer the user a range of related banking services and protections against loss of the private key or other credential needed to access a non-hosted wallet, which would translate to loss of value. Both hosted and non-hosted wallets will likely have AML risk and potentially financial stability risks if users are storing large amounts of CBDC in their wallets, which will need to be considered by Project Participants. Whether it is tokenized or account-based, wallets will need to have KYC controls, which means establishing the holder's identity. Global standards setters such as the Financial Action Task Force (FATF) are currently exploring the money laundering risks of unhosted wallets, which we believe should be well-understood to appropriately mitigate.³⁷

³⁶ See, e.g., Heidi M. Peters, *Defense Primer: U.S. Defense Industrial Base*, Congressional Research Service (Feb. 6, 2020), <https://fas.org/sgp/crs/natsec/IF10548.pdf> (noting “[t]he Department of Defense (DOD) relies on a wide-ranging and complex industrial base for the products and services that enable the Department’s warfighting capabilities.”).

³⁷ Unhosted wallet transfers are similar to cash transfers between individuals except a CBDC would be digital and thus faster. See *12-Month Review of the Revised FATF Standards on Virtual Assets and Virtual Asset Service Providers*, FATF (June 2020), <https://www.fatf-gafi.org/media/fatf/documents/recommendations/12-Month-Review-Revised-FATF-Standards-Virtual-Assets-VASPS.pdf>.

Likewise, especially during a transition period, providing users with an ability to recover lost credentials (that would lead to lost funds) will be critical. One potential solution for this could be to provide interoperability of the wallet software used for digital dollars with one or more decentralized identity platforms, and possibly the traditional financial system, that allow users to recover credentials through biometrics or other means. Another alternative would be through using trusted (and regulated) intermediaries who could provide identity services and facilitate account recovery for users as a service. It is also possible that, in lieu of a software wallet that might reside on a smartphone, desktop computer, or “cold storage” device, the private key used to control digital dollars could be stored on a microchip embedded in a plastic card that could be retained in a user’s physical wallet. Both methods of storing digital dollars will require consideration to mitigate potential risks from software and hardware wallets.

As the White Paper recognizes, mobile payment providers should be able to adapt their business models to serve as wallet providers for digital dollars, allowing these private sector participants to design wallet products based on customer preferences.³⁸

c. Relationship with Decentralized Identity Initiatives

To balance the risks of maintaining user privacy and avoid creating vulnerable user data “honeypots” while allowing for wallet recovery if a holder of digital dollars loses their credentials, decentralized identity platforms may provide an important role.³⁹ This topic is not addressed in the White Paper,⁴⁰ and further examination of the benefits of integrating a decentralized identity protocol with adoption of a U.S. CBDC should be explored by the Project Participants. The use of a decentralized identity protocol may also foster greater inclusion of underserved populations by allowing residents with valid government-issued credentials issued in another jurisdiction to “passport” these credentials for use in creating a wallet to hold U.S. digital dollars. The foundation of digital identity credentials is instrumental when developing these systems.⁴¹

³⁸ White Paper, *supra* note 1 at 38.

³⁹ See Consensys, *Blockchain Use Cases: Blockchain in Digital Identity*, <https://consensys.net/blockchain-use-cases/digital-identity/> (last visited Aug. 17, 2020).

⁴⁰ The White Paper does contain the following footnote: “A trusted digital identity will be a critical component of an end-to-end solution for effective benefit distribution; however, digital identity is not the focus of this paper and as such is not expounded upon.” White Paper, *supra* note 1 at 7.

⁴¹ See, e.g., *Strong Customer Authentication and Coronavirus*, (May 1, 2020), <https://www.fca.org.uk/news/statements/strong-customer-authentication-and-coronavirus> (delaying implementation of strong customer authentication (SCA) for e-commerce an additional 6 months in the exceptional circumstances of the COVID-19 crisis to minimize potential disruption to consumers and merchants.).

III. Mechanism Design Considerations

Besides the technological underpinnings of a U.S. CBDC discussed above, there are several considerations we believe are better thought of as “mechanism design” issues. In exploring a digital dollar, it is important to recall that individuals and businesses have had generation upon generation of experience with the utilization of our system of account-based money, supplemented by paper currency and coins. To effect a successful transition to full (or even partial) use of a U.S. CBDC, careful thought will need to be given to a range of design issues to ensure that the practical take-up of the digital dollar occurs successfully. This analysis should look at how data applicable to use of a digital dollar will be tracked, how retail adoption of a digital dollar can be encouraged, and how our two-tiered banking system could be preserved. We also recognize the interconnected nature of these (and other) design considerations and agree with the IMF that “[t]he CBDC decision making process should be viewed as dynamic and iterative with possibly multiple feedback loops.”⁴²

a. Sustaining a Two-Tiered Banking System

Although we expect that the implementation of a U.S. CBDC will bring many benefits, one of the most important concerns is that the availability of a digital dollar does not interfere with our two-tiered banking system. We are pleased to see the support for our two-tiered banking system in the White Paper⁴³ and encourage the Project Participants to maintain this position and explain how this will materialize in practice given the potential procyclical effects of a retail U.S. CBDC. This position was recently echoed by the Bank of England, which stated that “[h]istory indicates that the most effective and efficient payment system is a two tier one. In it, banks compete with each other at the interface with ultimate users while the central bank provides the foundation.”⁴⁴

Implementation of a U.S. CBDC does not necessarily contradict this model. Following the availability of digital dollars, commercial banks may still offer accounts to households, and hold, and pay interest on, consumers’ and businesses’ digital dollars not needed for day-to-day transactions.⁴⁵ In addition, commercial banks should be able to compete to provide efficient and effective user interfaces for consumers and business, including user KYC/AML checks, mobile wallets, and account recovery services. The Federal Reserve Bank of Philadelphia observed in a recent paper that

⁴² Kiff et al., *supra* note 12 at 8.

⁴³ White Paper, *supra* note 1, at 8.

⁴⁴ BIS, *BIS Annual Economic Report 2020*, 69 (June 2020), <https://www.bis.org/publ/arpdf/ar2020e3.pdf>.

⁴⁵ OCC, Authority of a National Bank to Provide Cryptocurrency Custody Services for Customers, Interpretive Letter No. 1170 (July 22, 2020), <https://www.occ.gov/topics/charters-and-licensing/interpretations-and-actions/2020/int1170.pdf>.

commercial banks play a critical role in capital formation through the process of maturity transformation.⁴⁶

b. Distribution of Digital Dollars

The White Paper states that “commercial banks (and potentially other regulated intermediaries with access to the Federal Reserve System) would exchange reserves for digital dollars to be distributed to end users much in the way they currently do when issuing physical cash to customers through ATMs.”⁴⁷ We support this approach in general, although we note further contemplation is needed around how this system could provide access to the unbanked, and how the existence of U.S. CBDC would not significantly affect the provision of private credit for the economy.

We encourage the Project Participants to continue looking at the distribution methodology for digital dollars to ensure that the approach adopted allows the widest group of Americans to benefit from this transformative technology.

c. Network Maintenance and Role of the Federal Reserve

One lesson our Members have observed from their work with decentralized blockchain and DLT protocols is the ongoing need for network maintenance. Whatever technology (or technologies) are ultimately adopted to implement a U.S. CBDC, a clear plan will be needed to support the maintenance and inevitable upgrading of the network. Consideration will need to be given during the development process as to where responsibility (and cost) for this maintenance will be placed. Given our overall preference for implementing a U.S. CBDC through means of a public-private partnership, our Members would like to see a means to capture the benefits of the innovation and efficiencies that can be provided by the private sector in this process. We encourage the Project Participants to continue to explore this element of implementation.

d. Data Tracking

One of the most self-evident aspects of any CBDC is the potential for highly granular, real-time tracking by the relevant central bank of spending activity by users. This data can provide a trove of highly valuable but previously unavailable economic data. In addition, through the matching of spending information of digital dollars with geolocation data, activity can be pinpointed, allowing regulators to see exactly where transactions are occurring. The White Paper appropriately acknowledges these benefits, observing that “digital transactions could offer degrees of traceability, and aggregate payment data

⁴⁶ Jesús Fernández-Villaverde et al., *Central Bank Digital Currency: Central Banking for All?* (June 2020), <https://www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2020/wp20-19.pdf>.

⁴⁷ White Paper, *supra* note 1 at 8- 9.

could be analyzed in real-time to provide key insights into economic health and activity.”⁴⁸ The increase in data tracking could also be beneficial to AML monitoring, especially in regards to cross-border payments.

Although data of this type could prove valuable to the Federal Reserve System in fulfilling its mandate to manage our financial system, as discussed above under “Privacy,” pervasive data tracking presents fundamental Constitutional and other concerns. While acknowledging that various payment service businesses are already recording and, sometimes, capitalizing on users’ personal payment data, the White Paper does not specifically prescribe allowing access to this data (and its societal benefits) to the federal government while preserving user privacy. The development of a potential U.S. CBDC should carefully consider how users’ privacy can be protected, for example, through statutory or other means. As mentioned above, the model we establish through the digital dollar may be emulated in other jurisdictions where the rights of individuals are less likely to be protected.

From a mechanism design perspective, this means that stakeholders should experiment with various implementations that maximize protection of individual rights while also allowing the Federal Reserve System the benefit of the economic data that may be obtained by the U.S. CBDC. Our Members can foresee several potential solutions, including, limiting the scope of personal data collected from U.S. CBDC transactions that may be shared with government authorities, the use of zero-knowledge proofs or other technological advances to allow the screening of individuals without knowing their identity, or a special court that will provide warrants to allow government access to personal data and untracked small denomination units that cannot be spent over certain pre-defined thresholds (similar to the current requirement of reporting transactions over \$10,000).⁴⁹ We encourage the Project Participants to use the Project’s high profile to explore these issues.

e. Driving retail adoption / acceptance

In the retail context, a U.S. CBDC that cannot be used by consumers in everyday transactions to (largely) the same extent as traditional cash and other payment methods will not be considered a success. A retail-focused U.S. CBDC will need to have widespread merchant acceptance shortly after issuance. This suggests the need for a coordinated effort to explain the benefits to merchants large and small of migrating their payments infrastructure to use of digital dollars. The merchant community has been asked to transition its point-of-sale devices several times in the last 10 years and a migration to acceptance of digital dollars will require not only a significant investment in hardware but also, likely, training for staff. We urge the Project Participants to look more closely at the costs and logistics of retail merchant adoption, including the considerations for e-commerce versus physical retailers, of a U.S. CBDC and advocate for ways to assist merchants who will need to incur these costs.

⁴⁸ *Id.* at 30.

⁴⁹ See *id.* at 20 for a brief discussion of this point.

f. Interoperability of a Digital Dollar with Other Systems

One point frequently emphasized in the literature on CBDCs generally is the critical requirement of interoperability of CBDCs issued in different jurisdictions. At a minimum, a U.S. CBDC must be no less interoperable with both the legacy traditional account-based currencies and with new CBDCs introduced in other jurisdictions. Because the pace of CBDC development in different jurisdictions is likely to vary, achieving this level of interoperability will be no small task and internationally-agreed standards may be necessary. Private sector participants will play a critical role in the development of these standards and in establishing the foundation for the interoperability of a digital dollar with other systems. We anticipate a tension between moving forward with developing a U.S. CBDC and managing interoperability with projects moving either more swiftly or more slowly in other jurisdictions.

For example, the IMF notes that

interoperability and standardization across national or international digital payment systems are important considerations to keep cross-border options open for future evolution. To this end, it would seem prudent for central banks to consider coordinating their CBDC efforts closely and introducing sufficient flexibility into their CBDC designs to facilitate cross-border interoperability and standardization across CBDC implementations.⁵⁰

The White Paper states that “[t]he Project will continue to engage with ongoing CBDC research studies and pilots around the world and encourage the collective effort to achieve the financial infrastructure of the future.” We are glad to see this undertaking but believe that attention needs to be paid to this issue. For example, the U.S. could advocate for a coordinating body, such as the BIS, to create a specific workstream on interoperability of CBDCs to help prevent a world in which users must support multiple wallet and payment infrastructure protocols to conduct international business utilizing CBDCs. The Chamber also recognizes the danger of “design by committee” if the United States needs to meet lowest-common-denominator design standards. This is an area where the Project Participants can provide leadership to the wider global community by exploring ways to balance these competing considerations.

IV. Next Steps

We believe there are critical next steps that the Project Participants, and the Federal Reserve System, the Department of the Treasury, and other policy makers and regulators, should consider.⁵¹ Most important, the advocacy commenced with the

⁵⁰ Kiff et al., *supra* note 12 at 8.

⁵¹ We are encouraged to see the Federal Reserve Bank of Boston partnering with researchers at the Massachusetts Institute of Technology to build a hypothetical CBDC. Lael Brainard, Member of the

publication of the White Paper needs to continue. Since the White Paper was released, we have noted the active engagement by the Project Participants in a wide range of fora, including Congressional testimony, appearances with regulatory bodies, and privately organized webinars, podcasts, and other events. This is a necessary effort, but advocacy alone cannot progress the pace of development of a U.S. CBDC. We also need to see small-scale pilot programs and investment in public-private partnership initiatives that will allow for experimentation with different underlying technologies and implementation mechanisms. We would also like to see more quantitative work done on the economic costs and benefits of U.S. CBDC implementation. Finally, the White Paper's discussion of privacy issues is very high-level. We would like to see a specific workstream with meaningful opportunities for public consultation on how to balance user privacy and the government's legitimate need to enforce compliance with applicable laws and regulations.

Thank you for your consideration of these observations. We are available to serve as a resource as the Project continues its commendable work in promoting the discussion around the need for, and benefits, design, and implementation of a U.S. CBDC. We also look forward to actively participating in what we are certain will be a vibrant policy discussion on this topic that will touch every aspect of our society.

Very truly yours,



Perianne Boring
Founder and President



Amy Davine Kim
Chief Policy Officer

Federal Reserve System Board of Governors, An Update on Digital Currencies (Aug. 13, 2020),
<https://www.bis.org/review/r200814a.htm>.