May 20, 2022

VIA ELECTRONIC SUBMISSION

Ann E. Misback, Secretary
Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue, N.W.
Washington, D.C. 20551

Re: Money and Payments: The U.S. Dollar in the Age of Digital Transformation

Ladies and Gentlemen:

The Financial Services Forum (the "Forum")[1] appreciates the opportunity to comment on the Federal Reserve Board's (the "FRB") discussion paper on the uses and functions, potential benefits and risks and related policy considerations with respect to a potential U.S. central bank digital currency ("CBDC").[2] The development of a CBDC would have a unique and substantial impact on each of our member institutions, the eight U.S. global systemically important bank holding companies, given their unique roles in both the banking system and the payments system. Thus, we welcome the FRB's willingness to engage with a wide range of stakeholders and encourage the FRB to continue to take a deliberate and thoughtful approach to examining this novel and complex change.

In this letter, we highlight the following points.

- The Forum member institutions are committed to helping to ensure that the United States has a world-leading payments system that allows individuals, households and businesses to execute financial transactions quickly, securely and cost-effectively.
- To this end, the Federal Reserve, U.S. Government and private sector should work together to develop public-private partnerships that can undertake robust

[1] The Forum is an economic policy and advocacy organization whose members are the chief executive officers of the eight largest and most diversified financial institutions headquartered in the United States. Forum member institutions are a leading source of lending and investment in the United States and serve millions of consumers, businesses, investors and communities throughout the country. The Forum promotes policies that support savings and investment, deep and liquid capital markets, a competitive global marketplace and a sound financial system.

[2] *Money and Payments: The U.S. Dollar in the Age of Digital Transformation*, FRB (Jan. 2022), *available at* https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf.

research and development about new technologies and infrastructures, including a CBDC.
- As a part of the effort to develop a next-generation payments system, the FRB and U.S. Government should continue to undertake the work necessary to examine fully the potential risks of a CBDC, as well as alternative ways to achieve the goals associated with a CBDC and an enhanced payments system.
- These risks include: questions about the commercial viability of a CBDC; impact on bank funding and short-term wholesale funding markets; the effect on monetary policy; financial stability risks; and interoperability risks.
- A level regulatory playing field will help protect the U.S. payments system and consumers.
- Before any CBDC is adopted, the FRB and the U.S. Government should consider the appropriate legal and regulatory development that is necessary to support payments system innovation.

To be addressed thoroughly and with appropriate input, all of the above matters will benefit from transparent public dialogue and comment.

In addition, in the Appendix, we respond to the 22 questions posed by the FRB in the discussion paper.

I. The Federal Reserve, U.S. Government and private sector should work together to help ensure the United States has a world-leading payments system.

The Forum member institutions are committed to helping to ensure that the United States has a world-leading payments system that allows individuals, households and businesses to execute financial transactions quickly, securely and cost-effectively. To this end, the Federal Reserve and U.S. Government should work with the private sector and others to develop public-private partnerships to undertake robust research and development about potential new technologies and infrastructures, including a CBDC. That research and development should explore technological development, as well as the benefits and risks of, and appropriate legal frameworks needed to support, potential innovations.

These efforts should be used to help build a payments system of the future that is designed to achieve the following objectives:

- maintain a robust and stable financial system;
- maintain the U.S. dollar as the global reserve currency;
- foster competition amid a level regulatory playing field;
- continually enhance operational and cyber resiliency; and
- provide an appropriate level of privacy and data protection.

II. As a part of the effort to develop a next-generation payments system, the FRB and U.S. Government should continue to undertake the work necessary to examine fully the potential risks of a CBDC, as well as alternative ways to achieve the goals described above.

A. *Potential risks associated with CBDCs*

We urge the FRB and U.S. Government to continue to evaluate thoroughly the risks associated with a CBDC, as well as possible mitigants, before making a determination that a U.S. CBDC should be a part of the enhanced future payments landscape. This type of process should help to ensure any such determination is appropriate and also should help to inform implementation of any payments system innovations, including a CBDC. In particular, the following aspects of CBDCs warrant further study before any potential widespread adoption.

1. <u>Commercial viability for intermediaries</u>.

The discussion paper suggests that, compared to other retail CBDC design choices, an intermediated CBDC model would best serve the needs of the United States. The Forum member institutions agree that, among various CBDC models currently contemplated (*e.g.*, direct CBDCs, hybrid CBDCs), an intermediated CBDC model is the most desirable framework. Indeed, a direct model would seem to be far outside the Federal Reserve's expertise and core competencies, which are focused on interacting with institutions.[3] At the same time, it is not clear whether an intermediated model for retail CBDCs would be commercially viable for the financial institutions serving as intermediaries. Non-interest-bearing CBDCs held by clients of these intermediaries would not provide any funding for credit intermediation, which is a primary benefit and function of deposit-taking at banks. Therefore, it is not clear that financial institutions generally would have adequate incentives to build and maintain the requisite infrastructure to intermediate CBDCs. Thus, we believe that consideration of an intermediated CBDC must include study of the economic model(s) and incentives for the provision of CBDC intermediary services.

Relatedly, because CBDCs do not provide funds for credit intermediation, the introduction of a CBDC almost certainly would reduce the availability of, and increase the price of, credit. Therefore, there may be greater net benefits (including lower costs) for businesses and households in expanding and innovating existing commercial and governmental payment-related services than in introducing a CBDC. For example, Forum member institutions currently offer a number of payment-related services, ranging from various forms of electronic bill pay to funds transfer services, offering benefits similar to those envisioned with a CBDC. The U.S. Government also has launched several initiatives aimed at introducing innovation into the payments landscape, including

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[3] *See* Howell Jackson and Timothy Massad, *The Treasury Option: How the US can achieve the financial inclusion benefits of a CBDC now* (Mar. 2022) (noting that "the Federal Reserve Board traditionally interacts with commercial banks and has precious little experience, at least in modern times, with retail customers").

an instant payment service and efforts to experiment with stablecoin interoperability and use of distributed ledger technology more generally.[4] The benefits of these programs should be recognized and considered as potential alternatives to a CBDC in achieving the objectives of an enhanced payments system. Otherwise, widespread CBDC adoption could weaken not only credit availability but also private and public sector innovation.

2. Impact on bank funding and short-term wholesale funding markets.

As has been widely recognized, a CBDC has the potential to disrupt bank funding and short-term wholesale funding models.

The discussion paper notes that a widely available CBDC would act as a close, or in the case of an interest-bearing CBDC, near-perfect, substitute for commercial bank money, resulting in a substitution effect that could reduce the aggregate amount of deposits in the banking system and increase bank funding expenses. As explained above, this would reduce credit availability and increase credit costs for businesses and households. The discussion paper also notes that an interest-bearing CBDC could reduce demand for other low-risk assets such as investments in money market mutual funds and exchange-traded funds. Further, money market funds themselves could substitute holdings of current money market instruments (*e.g.*, repos, commercial paper or Treasury bills) for CBDCs. These factors could further exacerbate decreases in credit availability and increases in credit costs for households and businesses as well as the U.S. Government. There is additional uncertainty as to the likely magnitude of these flows and how financial market participants that gain or lose funding will adjust their behavior in response, and in the latter case, whether these participants will raise funds elsewhere or resort to deleveraging.

Although mitigants have been put forward, it is not clear how effective or durable these approaches would be. The discussion paper suggests that certain design choices could address these concerns: a non-interest-bearing CBDC or limits on CBDC interest or the amount of CBDC an end user may hold or accumulate are offered as possible solutions.

Although these risks appear highest for an interest-bearing CBDC design, a non-interest-bearing CBDC may not be a sufficient mitigant. Not only does a non-interest-bearing CBDC itself present risk to credit intermediation, but it also may be made to provide interest in the future, which would make this risk significantly more acute. In particular, once a CBDC infrastructure is established, providing interest on CBDCs would be a relatively simple modification from both an operational and legal perspective. Thus, any constraints initially imposed on CBDCs to protect against broader market structure and stability concerns eventually could yield to political pressure to relax these limitations. Therefore it would seem unwise to create a situation where deliberative decisions that

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[4] The Federal Reserve Banks have launched FedNow, an instant payment service for financial institutions to enable safe and efficient real-time payment services. *See FedNow Service*, FRB Press Release (Apr. 28, 2021), *available at* https://www.federalreserve.gov/paymentsystems/fednow_about.htm. The Federal Reserve also is experimenting "with stablecoin interoperability and testing of retail payments across multiple distributed payment ledger systems". Lael Brainard, *Preparing for the Financial System of the Future* (Feb. 18, 2022), *available at* https://www.federalreserve.gov/newsevents/speech/brainard20220218a.htm.

were made to protect U.S. financial stability and market structure integrity could end up in a political bull's eye, and then be changed quickly and without the current deliberative process regarding the risks and benefits of different design choices.

3. Effect on monetary policy.

Before any CBDC is implemented, there should be additional in-depth research and analysis, subject to public review and comment, on the potential impact of a CBDC on the Federal Reserve's ability to effect its monetary policy objectives. Among the issues that need to be more fully understood is how the Federal Reserve would maintain its ability to control reserve balances in an environment where commercial bank deposits may be reduced during times of stress by funds being moved into CBDC balances.

It is not clear that traditional monetary policy arguments in favor of issuing a CBDC outweigh the attendant risks to monetary policy.[5] For example, some have argued that a CBDC could strengthen the pass-through of the policy rate to money markets and deposit rates and help address the zero lower bound constraint.[6] But it is far from clear that the pass-through of the policy rate needs further strengthening, and existing tools may offer similar solutions. Further, a CBDC's ability to steer real activity and inflation would require the CBDC to be interest-bearing,[7] which presents other important concerns for the financial system, as discussed above. Other arguments that have been put forward include that CBDCs could be used to stimulate aggregate demand through direct transfers to the public. However, to achieve this result, recipients and their accounts would need to be accurately identified, which would be a key challenge and may implicate privacy concerns.[8]

In addition, the Federal Reserve may be required to hold a larger balance sheet to conduct monetary policy, as businesses and households demand significant quantities of CBDC in addition to existing Federal Reserve liabilities. This dynamic could further blur the distinction between fiscal and monetary interventions and raise concerns regarding the central bank's independence from the fiscal authority.[9] The introduction of a CBDC also could impact the overall volatility of autonomous factors for monetary policy implementation (CBDCs are considered such a factor), thus affecting these factors' predictability. In addition, based on the specific assets held to accommodate the issued

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[5] *See Central bank digital currencies*, Committee on Payments and Market Infrastructures (Mar. 2018), *available at* https://www.bis.org/cpmi/publ/d174.pdf.

[6] *See, e.g.*, Michael D. Bordo and Andrew T. Levin, *Central Bank Digital Currency and the Future of Monetary Policy* (Aug. 2017), *available at* https://www.nber.org/system/files/working_papers/w23711/w23711.pdf.

[7] *See BIS Annual Economic Report*, Bank for International Settlements (2021), *available at* https://www.bis.org/publ/arpdf/ar2021e3.pdf.

[8] *See id.*

[9] *See Central bank digital currencies: motives, economic implications and the research frontier*, BIS Working Paper No. 976 (Nov. 2021), *available at* https://www.bis.org/publ/work976.pdf.

CBDC, the Federal Reserve likely would need to conduct various kinds of maturity, liquidity and credit risk transformation.

All of these issues deserve thorough research, comment and consideration.

4. Financial stability risks.

Related to the two points above, the combination of disruption to bank funding and short-term wholesale funding markets and adverse effects on the Federal Reserve's ability to achieve its monetary policy objectives could introduce meaningful financial stability risks. One significant concern is that introduction of a CBDC could increase the latent risk of systemic bank runs. During periods of financial stress, businesses and households tend to shift their assets towards the intermediaries that appear to be the safest havens. Along these lines, a CBDC could lay the groundwork for "digital runs" of an unprecedented speed and scale because a CBDC is a credit-risk free alternative to bank deposits.[10] Therefore, the stability of retail funding dramatically could weaken, despite the existence of deposit insurance. The incentives to run could be sharper and more pervasive with a CBDC for uninsured deposits (such as deposit balances above the applicable deposit insurance limits) or deposits at institutions perceived to be weaker, thus exacerbating run risks at both weaker and stronger banks.

The discussion paper notes that financial stability concerns, and run risk in particular, could be mitigated by certain CBDC design choices (*i.e.*, a non-interest-bearing CBDC or limits on the amounts held or accumulated by end users). But stemming runs in these circumstances would be difficult, even if large lender of last resort facilities were to be provided. Further, CBDC interest rate caps or other limits likely would be ineffective as many depositors would seek to place funds at the ultimate safe haven (the U.S. central bank) at almost any price. Moreover, quantitative limits on the amount of CBDCs that could be held by a single person likely could be avoided or evaded to some extent and even could result in price deviations between the forms of a central bank's money (*e.g.*, paying above par for a CBDC), which, in turn, could hinder monetary policy tools. Similar to the discussion above regarding the choice between an interest-bearing and non-interest-bearing CBDC, we caution that any such constraints initially imposed on a CBDC may later be adjusted relatively easily without sufficient deliberation.

Thus, more research into the financial stability risks of CBDCs, and potential mitigants, is critical. A full analysis should be conducted, subject to public review and comment, on the range and severity of these potential effects before CBDCs and corresponding design choices are further considered.

[10] *See supra* note 7. *See also* 87 Fed. Reg. 12957, 12961 (Mar. 8, 2022) (explaining that investors seek high-quality liquid assets, such as balances held in Reserve Bank accounts, during times of stress and that this can negatively impact financial stability).

5. Interoperability.

With various central banks around the world continuing to actively consider, or proceeding with launching, their own CBDCs,[11] the issue of interoperability (*e.g.*, between different jurisdictional CBDCs, between different distributed ledger technology platforms and with other payment infrastructures and arrangements) has become even more apparent. CBDCs often are lauded for their potential to decrease transaction costs and increase efficiency in payment services. However, unless policymakers converge on some of the key design choices for CBDC and banks and other intermediaries have the technology and infrastructure necessary to execute cross-CBDC transactions, especially those involving different payment infrastructures, these benefits will not be realized. Rather, the result may be additional friction costs and heightened fragmentation in the global economy.

In addition, the Federal Reserve should consider the unintended consequences of cross-border availability of CBDCs in jurisdictions more vulnerable to capital outflows. Foreign holdings of a CBDC could result in international spillovers, such as volatility in foreign exchange rates, digital “dollarization”, facilitation of tax avoidance and diminished oversight ability by domestic authorities.[12]

Although the discussion paper notes the need for interoperability and international coordination, it does not offer details as how to achieve these goals or avoid unintended consequences. More research and analysis into the interoperability of CBDCs should be conducted, both with respect to any potential unintended consequences and with respect to underlying technology and infrastructures and appropriate allocation of jurisdictional authority over technical standards and convertibility. In particular, additional consideration also should be dedicated to understanding how to preserve flexibility in any interoperable framework in order to accommodate new CBDC platforms and systems as they develop as well as existing platforms as they evolve. Another set of issues that merits further consideration is, putting aside technical standards, what privacy and other human rights standards a jurisdiction’s CBDC and accompanying legal framework should embody before that country’s CBDC is interoperable with the CBDCs of democratic economies.

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[11] According to the Atlantic Council Central Bank Digital Currency Tracker, nine countries have fully launched a digital currency, 14 countries have launched pilot programs and 87 countries (representing more than 90% of global GDP) are exploring CBDCs.

[12] *See, e.g.*, *Central bank digital currencies: foundational principles and core features*, Bank for International Settlements (2020) (“A CBDC of one jurisdiction could impact on another’s monetary policy or financial stability... or be used to avoid laws and regulations outside a jurisdiction where sufficient controls are not in place.”), *available at* https://www.bis.org/publ/othp33.pdf.

B. Alternatives to CBDCs

In light of the potential risks discussed above, alternatives to a retail CBDC should be considered concurrently, including accelerated efforts to harness private sector and other government innovations and the possibility of a wholesale CBDC. As discussed in Section II.A.1, the private sector (including Forum member institutions) and public sector are actively engaged in advancing innovation in the payments system via new products and initiatives. Expanding and innovating existing commercial and governmental payment-related services, rather than introducing a CBDC, may result in greater net benefits, and lower costs, for businesses and households.

The Forum member institutions also recognize the importance of working to advance the inclusiveness of the financial system and are committed to promoting economic opportunity in underserved communities. To that end, many financial institutions, including the Forum member institutions, already have adopted their own programs to bolster financial inclusion.[13] As of yet, there is no clear evidence that a U.S. CBDC would provide a more robust means of expanding financial inclusion than these or other alternatives.[14] Further, a CBDC, in and of itself, would not address the underlying causes of exclusion surrounding increased digitalization of financial services.[15] We therefore suggest that more time and attention should be dedicated to determining the possible impact of a CBDC on financial inclusion before it is identified as a benefit of CBDC adoption.

In addition, research and development surrounding a wholesale CBDC also should be pursued concurrently because it may more readily accomplish key objectives. For example, with respect to cross-border payments, a wholesale CBDC potentially could make settlement systems for financial transactions more secure and efficient (*e.g.*, with respect to operational costs and use of collateral and liquidity), thus reducing costs of retail remittances and other cross-border transactions. Moreover, a wholesale CBDC potentially could allow for an expanded set of parties with direct access to digital central bank money and likely would be accessible 24/7, preventing operating hour mismatches.[16] It also could serve as a secure settlement asset for payment versus payment systems (alternatively payment versus payment could be part of the CBDC design), which could reduce credit and liquidity risks associated with cross-currency

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[13] *See, e.g.*, JP Morgan's *Path Forward* initiative, Morgan Stanley's *Institute for Inclusion* initiative and Wells Fargo's *Banking Inclusion Initiative*.

[14] *See*, *e.g.*, Jackson and Massad, *supra* note 3 (identifying difficulties with promoting financial inclusion through a U.S. CBDC).

[15] *See supra* note 12 (noting that increasing digitalization could leave certain sections of society behind, as potential barriers around trust, digital literacy, access to IT and data privacy concerns may create a digital divide).

[16] *See Central bank digital currencies for cross-border payments*, Bank for International Settlements (Jul. 2021), *available at* https://www.bis.org/publ/othp38.pdf.

payments.[17] Finally, pursuing a wholesale CBDC, rather than a retail CBDC, at least initially, may be a more prudent approach to developing and rolling out CBDC technology without risking disruptions to the broader financial system.

III. A level regulatory playing field will help protect the U.S. payments system and consumers.

The discussion paper notes that potential intermediaries for a CBDC could include commercial banks and regulated nonbank financial services providers. The discussion paper further notes that a CBDC "might also help level the playing field in payment innovation for private-sector firms of all sizes" and could "allow private-sector innovators to focus on new access services, distribution methods, and related service offerings".

To protect the payments systems and consumers, robust competition should be fostered *amid a level regulatory playing field*. The more opportunities for regulatory arbitrage are present, the more likely they will lead to a "race to the bottom", diminishing consumer protections and giving rise to latent risks in the system. To avoid this result, the regulatory framework should follow the principle of "same risk, same regulation" so that all parties are able to compete and innovate in a manner that helps maintain consumer protection and financial stability.

Therefore, any legal and regulatory framework that allows nonbank intermediaries to offer CBDC services or have access to a retail or wholesale CBDC should be designed so that those nonbank actors are subject to the same prudential, liquidity and related standards under Federal Reserve regulation, like commercial banks. This approach should foster innovation while providing consumers with appropriate protections. Along those lines, a uniform federal regulatory framework is more likely to promote a level playing field, and protect against regulatory arbitrage, than is a system that includes institutions regulated solely by one of many discrete state regulatory regimes. Otherwise, regulatory fragmentation may occur and lead to the concentration of risk outside, or on the edges of, the regulatory perimeter.

IV. The FRB and U.S. Government should consider the appropriate legal and regulatory development that is necessary to support payments system innovation.

Among the issues that the FRB and U.S. Government should continue to further examine and resolve prior to the introduction of a CBDC are the legal framework for:

- the FRB's authority to issue a CBDC;
- settlement and finality of transactions;
- privacy protections and, relatedly, responsibilities to monitor transactions for illicit finance concerns; and

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[17] *See id.*

- allocation of responsibility and risk for operational and cyber resiliency.

First, the discussion paper explains that the Federal Reserve does not intend to proceed with issuing a CBDC unless there is clear support from the executive branch and from Congress, ideally through a specific authorizing law. We support this approach and believe that, consistent with President Biden's Executive Order on Ensuring Responsible Development of Digital Assets,[18] the FRB's legal authority for issuing a CBDC (including the potential interaction between differing legal authorities[19]) should be fully examined and clarified before proceeding with a potential CBDC.

Second, new forms of payments systems are likely to create legal and operational questions regarding transaction settlement and finality. Such questions regarding a U.S. CBDC should be identified and fully addressed before its implementation.

Third, it is worth considering whether changes to the law may be necessary to prescribe most appropriately standards for data privacy and responsibility for operational and cyber resiliency, rather than through regulatory action alone. In determining whether regulatory or legislative action is appropriate, the pros and cons of each approach as well as their impact on market participants' expectations should be considered. In an intermediated CBDC model, privacy requirements and allocation of operational and cyber resiliency risk particularly will impact those financial institutions that ultimately serve as intermediaries, especially the Forum member institutions given their role in the payments system. A lack of legal clarity could subject these financial institutions to meaningful regulatory and legal risk, further diminishing the commercial viability of CBDC intermediation (which already is unclear, as discussed in Section II.A.1). Instead, bank involvement in CBDC intermediation should be welcomed, as these financial institutions will bring their long history of robust risk management and privacy compliance practices to the space. A regulatory framework that appropriately and clearly allocates responsibility among the government and private sector actors can mitigate these concerns and ensure the level playing field necessary to fully realize the benefits of an innovative payments system.

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[18] President Biden's March 9, 2022 Executive Order on Ensuring Responsible Development of Digital Assets (the "EO") requires, among other things, that the Department of Justice provide an assessment of whether legislative changes are necessary to issue a U.S. CBDC should it be deemed appropriate and in the national interest. The Department of Justice has 180 days from the date of the EO to provide the assessment and 210 days from the date of the EO to provide a corresponding legislative proposal.

[19] The power to issue a CBDC, pursuant to any authority granted to the FRB, may require approval from the Treasury Department. Under 12 U.S.C. § 419, after the FRB orders banknotes from the Treasury's Bureau of Engraving and Printing, it is provided that "the notes shall be delivered to the [FRB] subject to the order of the Secretary of the Treasury for the delivery of such notes in accordance with this [Act]".

Thank you for considering these comments. Please feel free to contact the undersigned (KFromer@fsforum.com) with any questions.

Respectfully submitted,

Kevin Fromer
President and Chief Executive Officer
Financial Services Forum

Appendix

CBDC Benefits, Risks and Policy Considerations

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

   Our letter discusses some of the key risks, benefits and policy considerations of a U.S. CBDC. We support the Federal Reserve's deliberative approach to a CBDC and believe the Federal Reserve and U.S. Government should continue to undertake the work necessary to examine fully the potential risks of a CBDC, as well as alternative ways to achieve the goals associated with an innovative payments system.

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

   As noted in Section II.A.1, private market innovation already is improving the existing payment infrastructure through the development of electronic payment facilities, electronic cash transfer services and related offerings. The U.S. Government also has launched several initiatives aimed at introducing innovation into the payments landscape, including an instant payment service and efforts to experiment with stablecoin interoperability and use of distributed ledger technology more generally. Existing and developing products, such as tokenized or digitized deposits, would appear to provide similar benefits to consumers as would a CBDC. Moreover, adoption of a CBDC likely would forestall or weaken incentives for private market innovation that are currently building on existing technologies and are proving to be popular among consumers.

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

   As noted in Section II.B, many financial institutions, including the Forum member institutions, already have adopted their own programs to bolster financial inclusion, such as by the elimination of certain fees. Public-private partnerships, such as "Bank On", and other regulatory efforts also are improving financial inclusion.

   There is no clear evidence that a U.S. CBDC would expand financial inclusion more effectively than these alternatives or other available options. Moreover, the use of an intermediated CBDC would not necessarily entail increased financial inclusion, as establishing and maintaining a digital wallet would likely be very similar to establishing and maintaining a deposit account.

4. **How might a U.S. CBDC affect the Federal Reserve's ability to effectively implement monetary policy in the pursuit of its maximum-employment and price-stability goals?**

As explained in Section II.A.3, a CBDC appears to present significant risks to the Federal Reserve's ability to implement monetary policy. People likely would easily be able to substitute physical cash, commercial bank deposits and other safe assets for CBDCs. Availability of such extremely safe assets, especially in times of stress or market volatility, could reduce the effectiveness of the Federal Reserve's monetary policy tools and require the Federal Reserve to hold a larger balance sheet, which could further blur the distinction between fiscal and monetary interventions and raise concerns regarding the Federal Reserve's independence.

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

As noted in Section II.A.2, a CBDC has the potential to disrupt bank funding and short-term wholesale funding models. Past crises clearly evidence the flight to safer (or the safest available) assets during market turmoil. For example, the public's demand for physical currency grew substantially during the financial crisis despite strong evidence of the soundness of banks and other assurances, as demonstrated in the chart below.[20] Specifically, the amount of currency in circulation grew by 9% from 2005 to 2007, whereas the amount of currency in circulation grew to over 14% from 2008 to 2009. In fact, currency holdings grew by 10% between September 2008 and June 2009.

Moreover, because it is a near-perfect substitute for commercial bank deposits, an interest-bearing CBDC model exacerbates these financial stability risks. Moreover, establishing only a non-interest-bearing CBDC does not ensure that the heightened risks of an interest-bearing CBDC will not arise, as the latter

[20] FRED data on currency component of M1.

subsequently could be implemented relatively quickly and without the current deliberative process regarding the risks and benefits of different design choices.

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

   Please see responses to questions 4 and 5 for a description of how a CBDC may adversely affect the financial sector. A key difference between a CBDC, on the one hand, and stablecoins and other forms of nonbank money, on the other, is that a CBDC will be considered safer than nonbank money because it is a liability of the central bank. Our responses to questions 4 and 5 are premised on this key difference. In other words, the risks described in our responses to questions 4 and 5 are not present for nonbank money. Rather, these significant risks appear unique for CBDCs.

7. **What tools could be considered to mitigate any adverse impact of CBDC on the financial sector? Would some of these tools diminish the potential benefits of a CBDC?**

   As explained in Section II.A.2, non-interest-bearing CBDCs appear to pose less risk to the financial sector than interest-bearing CBDCs, due in large part to the increased substitution risk of the latter for commercial bank money and other low risk assets. Quantitative caps or other limits on individual ownership of CBDCs may similarly limit this risk. However, as explained in Sections II.A.2 and II.A.4, such constraints on a CBDC easily may be removed by a future Congress or other policymakers without full deliberation of the risks and benefits of doing so.

8. **If cash usage declines, is it important to preserve the general public's access to a form of central bank money that can be used widely for payments?**

   Cash usage has declined over time, and commercial bank money currently is widely used for payments.[21] Moreover, given the safety and substitutability of

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[21] Since 2017, the share of U.S. consumers who use cash to make payments in a typical month has declined annually from approximately 27% in 2017 to approximately 21% in 2020. *See Survey of Consumer Payment Choice*, Federal Reserve Bank of Atlanta (May 18, 2021), *available at* https://www.atlantafed.org/banking-and-payments/consumer-payments/survey-of-consumer-payment-choice?panel=1. The share of U.S. consumers making at least one online purchase in a typical month increased from 59% in 2019 to 66% in 2020, and the share making at least one mobile phone payment in the prior 12 months increased from 38% in 2019 to 46% in 2020. *See The 2020 Survey of Consumer Payment Choice: Summary Results*, Federal Reserve Bank of Atlanta (Apr. 28, 2021), *available at* https://www.atlantafed.org/-/media/documents/banking/consumer-payments/survey-of-consumer-payment-choice/2020/2020-survey-of-consumer-payment-choice.pdf. In addition, according to the Federal Reserve's 2020 Survey of Consumer Payment Choice, debit cards were used most often per month (34%), followed by credit cards (26%). *See id*. In April 2021, the share of Americans making a cash payment declined 15 percentage points to 58%, compared to August 2020. *See FedNotes*, Federal Reserve Bank of San Francisco (2022), *available at* https://www.frbsf.org/cash/publications/fed-

cash and commercial bank deposits in general, it is not clear that it is important to provide general public access to central bank money that can be used widely for payments.

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

Banks, nonbanks and the Federal Reserve are developing numerous potential ways to make domestic and cross-border payments quicker and less costly. This development is expected to continue and, with additional regulatory clarity, likely will increase. Moreover, developments to date generally do not appear to be impeded by the lack of a U.S. CBDC or present the same type and degree of risk to credit availability, financial stability and monetary policy as does a CBDC.

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

The Federal Reserve and U.S. Government should continue to undertake the work necessary to examine fully the potential risks of a CBDC, as well as alternative ways to achieve the goals associated with an innovative payments system. Decisions of other large economy nations regarding a CBDC are some of the many considerations that should be taken into account as part of this examination, but the decisions of other nations should not be determinative.

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

Our letter and response to question 7 above discusses potential mitigants raised in the discussion paper. Although there may be others, it is not yet clear whether any mitigant could adequately protect against the significant risks of a CBDC, especially to the extent that future policymakers could quickly eliminate such a mitigant without proper consideration.

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

Current law and regulation seek to effect an appropriate balance between privacy and illicit finance concerns, and regulated banking organizations have decades of experience effectively implementing these requirements. Banking organizations should be able to protect consumer privacy while also protecting against illicit finance to the extent that there are clear expectations of the banking organizations' responsibilities. Therefore, and in light of the increased risk to privacy that digital transactions present, the U.S. Government should set clear

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notes/2021/september/consumer-payments-covid-19-pandemic-diary-consumer-payment-choice-supplement-3/.

expectations for CBDC intermediaries—through new law and clarifications on the application of existing law—regarding privacy and illicit finance.

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

To ensure such design choices are implementable and minimize unintended consequences, the U.S. Government should clearly identify the persons that would bear implementation responsibilities, as well as legal, operational and other risks. Such identification should be a part of the U.S. Government's deliberative approach to a U.S. CBDC and also include public comment.

14. Should a CBDC be legal tender?

Treatment as legal tender, as well as questions regarding transaction settlement and finality in general, should be fully addressed before implementation of any CBDC. Providing sufficient clarity likely will require amendments to existing law.

CBDC Design

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

Please see the response to question 7. We also note that, as a technical matter, the payment of interest appears inconsistent with a currency.

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

Please see the response to question 7.

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

The Forum's member institutions fully endorse the concept of "same activity, same risk, same regulation". Banking organizations function as payments intermediaries currently and are highly regulated and, therefore, have been identified as likely intermediaries of a CBDC. This level of regulation and supervision serves many important goals, including the safety of the payments systems, consumer protection, financial stability and combatting illicit finance. To the extent other types of entities are permitted to serve as CBDC intermediaries, these other types of entities acting as intermediaries should be subject to the same regulation and supervision as banking organizations when performing the same functions. In addition, equivalent regulation and supervision also should foster competition and avoid a "race to the bottom", as discussed in Section III.

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

Although offline capabilities may provide some public benefit, there appear to be significant policy concerns (such as counterfeiting and other types of financial crime) as well as operational obstacles associated with the capabilities. Therefore, the Federal Reserve and U.S. Government should continue to consider whether, and the extent to which, such concerns and obstacles may be addressed.

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

Important elements of the design of a retail payment instrument are ease of use and point-of-sale acceptance. Any benefits of a CBDC could be largely blunted if the CBDC is not easy to use or widely accepted. Therefore, further research on the potential design of a CBDC should include these elements to help determine whether the purported benefits of a CBDC may be achieved.

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

As noted in Section II.A.5, interoperability and transferability across payment platforms is an important issue that should be studied and resolved before any CBDC is implemented. Unless banks and other intermediaries have the technology and infrastructure necessary to execute cross-CBDC transactions, especially those involving different payment infrastructures, the potential benefits of a CBDC will not be realized. Rather, the result may be additional fiction costs and heightened fragmentation in the global economy.

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

As discussed in the letter and the response to the questions above, banks, nonbanks and the Federal Reserve are developing numerous innovations to facilitate the transfer of money domestically and cross-border. This development is expected to continue and, with additional regulatory clarity, likely will increase. Currently, it is unclear whether, or the extent to which, a CBDC would provide benefits in addition to the services banking organizations and other institutions offer or are expected to offer in the near future. Further innovation should clarify—and may even change—the risk-benefit analysis. Therefore, we support the Federal Reserve's deliberative approach to a CBDC and believe that the Federal Reserve and U.S. Government should continue to undertake the work necessary to examine fully the potential risks of a CBDC, as well as alternative ways to achieve the goals associated with an innovative payments system.

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

The Federal Reserve, the U.S. Government and the private sector should work together to develop public-private partnerships that can undertake research and development about new technologies and infrastructures, including the various potential design principles that could be used to implement a CBDC, the risks of each such design choice and whether there are alternative ways to achieve the goals associated with a CBDC and an enhanced payments system (with fewer of the attendant risks).