

May 20, 2022

**Board of Governors of the Federal Reserve System
Washington, D.C.**

**Re: [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#),
a Discussion Paper of the Board of Governors of the Federal Reserve System**

Introduction

CFA Institute¹ submits these comments to the Board of Governors of the Federal Reserve System in response to its paper [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#) (“Discussion Paper” or “Paper”).²

This letter has been informed by the following activities:

- A half-day roundtable with a select group of fintech experts, investors and practitioners
- Discussion of central bank digital currencies (“CBDCs”) and cryptoassets with our Capital Markets Policy Council, an advisory body of investment professionals and CFA charterholders who meet voluntarily to provide advice to CFA Institute on capital markets policy issues
- Informal conversations with the professional investment staff of certain public pension plans
- Initial discussions with financial institutions and service providers on their views, and those of their broker-dealer and investment adviser clients, with respect to cryptoassets, cryptocurrencies and CBDCs.

Executive Summary

The introduction of a CBDC would entail a number of likely benefits, including healthy competitive pressures on banks to improve their payments services by speeding the process, lowering costs, and enhancing efficiencies. A migration of funds from money market funds and

¹ CFA Institute is the global association of investment professionals that sets the standard for professional excellence and credentials. The organization is a champion of ethical behavior in investment markets and a respected source of knowledge in the global financial community. Our aim is to create an environment where investors’ interests come first, markets function at their best, and economies grow. There are more than 180,000 CFA® charterholders worldwide in more than 160 markets. CFA Institute has nine offices worldwide and there are 160 local societies

² Board of Governors of the Federal Reserve System, [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#), (Jan. 2022), (“Discussion Paper”), available at <https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf>.

other non-bank vehicles into CBDCs would limit the impact of any future runs on the non-bank assets and thus strengthen the resilience of financial markets.

A CBDC would, however, also introduce risks. A CBDC could lead to an expanded central bank role in the economy, which could crowd out private initiatives, hamper the market's role in price discovery, and invite political interference in the Fed. The introduction of a CBDC into the economy is untested, and any failure or significant operational challenges would risk undermining public confidence in the Federal Reserve, the U.S. dollar, and the financial system. A CBDC would present both positive and negative implications for consumer protection and the risks of fraud.

Depending on its design, a CBDC would have substitution effects vis-à-vis a variety of assets, including bank deposits, private cryptocurrencies or cryptoassets, and non-bank instruments such as money market funds, repo, and commercial paper.

A CBDC would have certain advantages that no private stablecoin or cryptocurrency could match, including the absence of liquidity and credit risks. Nonetheless, it is reasonable to ask whether properly regulated stablecoins might be a preferable market solution to the goal of enhancing banking and payment infrastructure.

Digital currencies, whether private cryptocurrencies or a CBDC, may have the potential to promote financial inclusion, but more research is needed to confirm that possibility. The Federal Reserve and the regional banks should continue to conduct research on addressing the needs of the unbanked and underbanked.

Our roundtable participants emphasized concerns that the U.S. and its commercial banks have fallen behind in investments in transaction payment infrastructure, resulting in frictions and slow settlement speeds. By addressing those needs, a CBDC would bolster the global dominance of the U.S. dollar.

Below we address selected questions posed in the Discussion Paper (following the numbering in the Paper).

Q1. What additional potential benefits, policy considerations, or risks of a CBDC may exist that have not been raised in this paper?

Positive Potential Benefits

On balance, we believe that the substitution effects of a CBDC would reduce the amount of money invested in runnable assets, such as money market funds, and therefore would enhance **financial stability**.³ This would be particularly true if the CBDC were designed to bear interest and the supply was not greatly limited.

³ Bank deposits are also subject to run risks. The combination of prudential regulation, supervision of banks, and FDIC insurance greatly reduces the run risks, however, though it does not eliminate them.

We believe that the introduction of a CBDC would add to **healthy competitive pressures** on banks to improve their payments by speeding the process, lowering costs, reducing frictions and enhancing efficiencies.

These new competitive pressures could cause commercial banks to become more responsive to consumers. The Paper notes that a CBDC could foster competition by leveling the playing field in payment innovation and removing barriers to new firms, including small ones. These competitive pressures could prompt commercial banks to undertake their own innovations in payment infrastructure. Thus, a CBDC could have the indirect effect of encouraging banks to enhance their services and payment systems.

Moreover, depending on its design, a CBDC could serve as an attractive alternative to bank deposits, thanks in part to payment efficiencies and potentially lower payment transaction costs. That could place pressure on banks to innovate and improve their own payment systems. Thus, the introduction of a CBDC would have both direct and indirect positive effects on banks and their payment systems.

Absent competitive pressures, banks might have overriding financial and operational incentives to build in delays in the clearing and settlement of payment transactions. For example, banks profit from the float opportunities provided by delays in settlement and clearance of checks. In addition, a pause in settling payment transactions has the benefit of affording banks time to detect and correct instances of fraud.

At the same time, however, banks are facing competition from nimble non-bank and fintech firms with innovative payment services and platforms. This competition—combined with the mere prospect of a future CBDC—may already be having a salutary impact on banks. There is already momentum for the payment ecosystem, including banks, to move rapidly to increase payment clearing and settlement speeds.

Current status of the payment infrastructure system

In considering whether to introduce a CBDC, it will be important for the Federal Reserve to establish a baseline of the current state of the banking payments infrastructure. We have heard two quite contradictory views on this topic.

On the one hand, fintech entrepreneurs as well as some academic experts have insisted that banks, having enjoyed a preeminent status in our finance system, have woefully underinvested in the payment infrastructure. This, according to the critics, has led to a lack of innovation and sub-standard payment infrastructures. Costs are excessive and settlement times slow, with weaknesses especially pronounced in cross-border payments. Some fintech entrepreneurs claim to see demand from institutional customers of commercial banks—including the back offices of institutional investors and corporate treasuries—for dramatically improved payment services and infrastructures.

These claims notwithstanding, our initial conversations with senior executives of international corporations and chief investment officers of public pension funds indicate that they are

generally satisfied with the current level of banking services. Increases in inflation and interest rates, however, would make payment delays more costly for some market participants and therefore heighten demand for faster payments.

It could be premature to declare the need for a complete overhaul of banking system infrastructure on the basis of the presumed advantages of crypto services. We caution, however, that we are still at an early stage of our research. Further discussions with banking incumbents can lead to a better appreciation of the technical nature of the infrastructure fault lines before we can conclude that there is demand for modernization at decent cost levels.

Moreover, the Federal Reserve expects next year to introduce the FedNow Service, a new 24x7x365 interbank settlement service with clearing functionality to support instant payments in the United States.⁴ Successful introduction and widespread adoption of the FedNow Service would address one of the key arguments advanced in favor of a CBDC; i.e., that the current payment settlement infrastructure is outdated and in need of modernization. A successful FedNow payments system would go a long way toward obviating that need.

The literature on this topic seems to reflect nuances, if not differences, in viewpoints. For example, a recent publication of the Bank for International Settlements maintained that the current approach (combining limited access to digital central bank money with widely available cash) “has, in general, served the public and the financial system well, setting a high bar.”⁵

Nonetheless, in a speech in 2021, Dr. Lael Brainard, Vice Chair of the Board of Governors of the Federal Reserve System, described operational inefficiencies in the payments system:

One expected benefit is that a CBDC would reduce or even eliminate operational and financial inefficiencies, or other frictions, in payments, clearing, and settlement. Today, the speed by which consumers and businesses can access the funds following a payment can vary significantly, up to a few days when relying on certain instruments, such as a check, to a few seconds in a real-time payments system.⁶

Risks

While the Federal Reserve is engaged in various experiments related to a hypothetical CBDC,⁷ its actual introduction into the economy is **untested**. Failure or significant operational

⁴ On May 19, 2022, the Federal Reserve Board finalized a rule that governs funds transfers over the Federal Reserve Banks' FedNow Service. See Federal Reserve Board, Press Release, Federal Reserve Board finalizes rule that governs funds transfers over the Federal Reserve Banks' FedNow Service, (May 19, 2022), available at <https://www.federalreserve.gov/newsevents/pressreleases/other20220519a.htm>.

⁵ Bank for International Settlements, Committee on Payments and Market Infrastructures, Central Bank Digital Currencies, (March 2018) (“CPMI Paper on CBDCs”) at 1, available at <https://www.bis.org/cpmi/publ/d174.pdf>.

⁶ Lael Brainard, Private Money and Central Bank Money as Payments Go Digital: an Update on CBDCs, Remarks at Consensus by CoinDesk 2021 Conference, (May 24, 2021) (“Brainard Speech”), at 5.

⁷ See Discussion Paper *supra* note 2 at 23 (noting experimental research conducted, among others, by the Board’s Technology Lab and by a collaborative project between the Federal Reserve Bank of Boston and the Massachusetts Institute of Technology’s Digital Currency Initiative.)

challenges could undermine public confidence in the Federal Reserve, in the U.S. dollar, and, more generally, in the financial system.⁸

A CBDC could lead to an **expanded central bank role in the economy**. For example, introduction of CBDCs could lead to an expanded balance sheet. If the Federal Reserve were also to expand its holdings of bonds or other assets,⁹ that would risk crowding out private sector investments and thwarting or distorting price discovery mechanisms. An expanded Federal Reserve role also could invite greater political interference.¹⁰

Policy considerations regarding a CBDC suggest a broader regulatory question that extends to fintech innovations in general. Namely, it will be a challenge for the Federal Reserve and other financial regulators to adopt a **technology-neutral approach to regulation**, without favoring commercial banks or other incumbents with vested interests in legacy systems.¹¹ The members of our roundtable expressed concern lest regulators tip the scales in ways that would discriminate in favor of incumbents or erect barriers to new and innovative fintech companies.

A CBDC would present both positive and negative implications for **consumer protection and the risks of fraud**. On the positive side, a CBDC would serve as a safe, trustworthy alternative to private cryptocurrencies or other cryptoassets that lack consumer and investor protections and present an array of risks, including redemption risks.¹² On the other hand, a CBDC could lead to a heightened risk of fraud by facilitating large and instant payments.

A CBDC also could raise **environmental questions**, because certain crypto processes consume considerable amounts of energy. In designing a CBDC, the Federal Reserve should consider whether it would be compatible with other governmental policies and goals related to climate change and energy consumption.

Q2. Could some or all of the potential benefits of a CBDC be better achieved in a different way?

⁸ Bank for International Settlements, Committee on Payment and Market Infrastructures and World Bank Group, Payment aspects of financial inclusion in the fintech era, (April 2020) (“CPMI Financial Inclusion”), at 31 (“A central bank may face additional operation and reputational risks, including from using new technologies on a scale yet to be tested, when issuing a CBDC.”)

⁹ “To maintain an ample supply of reserves, the Federal Reserve might need to substantially expand its holdings of securities.” See Discussion Paper *supra* note 2 at 19.

¹⁰ See CPMI Paper on CBDCs *supra* note 5 at 2 and 14 (cautioning that an expanded role could include allocating economic resources, moving into uncharted territory, reducing the role of the market in price setting, and leading to greater political interference).

¹¹ This point was repeatedly emphasized in our roundtable with leading Fintech experts. Likewise, a senior official of a financial company expressed pessimism that commercial banks would use their political clout to block innovative fintech solutions that would be too disruptive to the banks. See also CPMI Financial Inclusion *supra* note 8 at 46 (“[I]t is important to ensure that requirements do not discriminate against the use of a particular technology or disregard new technologies altogether.”).

¹² See, e.g., CPMI Financial Inclusion *supra* note 8 at 47 (noting redemption risks and commenting, “In the absence of adequate regulation and supervision, users’ holdings of cryptoassets do not benefit from the legal protection associated with regulated instruments. For instance, in the event of bankruptcy or hacking of a cryptoasset service provider that controls access to customers’ holdings of cryptoassets (eg custodian wallet providers), the holdings would neither be subject to preventive measures (eg safeguarding and segregation) nor benefit from schemes or other arrangements to cover any losses incurred.”). [Internal citation omitted.]

A CBDC would have certain advantages—including the absence of liquidity and credit risks—that no private stablecoin or cryptocurrency could match. Moreover, private cryptocurrencies present a number of risks, including investor and consumer protection risks, counterparty risks and financial stability risks. A bewildering cacophony of competing banknotes hobbled the development of the U.S. dollar in the past, and that history lesson should serve as a cautionary tale of what can go wrong with private issuance of money.¹³

Nonetheless, it is reasonable to ask whether properly regulated stablecoins might be a preferable market solution to the goal of enhancing banking and payment infrastructure. As the Federal Reserve considers the merits of introducing a CBDC, it should continue to evaluate whether its introduction would provide unique benefits that private cryptocurrency initiatives could not provide.

Other jurisdictions are facing the same question. In the U.K., for example, the House of Lords' Economic Affairs Committee has entered the debate on whether the central bank should issue a digital version of the Pound Sterling. In a report titled, "Central bank digital currencies: a solution in search of a problem?" the Economic Affairs Committee concludes there is no convincing case for why the UK needs a CBDC.¹⁴

Recent developments with cryptocurrencies and stablecoins—including the collapse of the algorithmic stablecoin Terra USD and its sister cryptocurrency Luna—make this public debate all the more urgent. In sum, the Federal Reserve should continue to analyze the merits, risks and policy implications of whether to develop a U.S. dollar CBDC.

Q3. Could a CBDC affect financial inclusion? Net effect positive or negative?

We believe that digital currencies, whether private cryptocurrencies or a CBDC, may have the potential to promote financial inclusion, but more research is needed to confirm that possibility. This uncertainty was reflected in our roundtable discussion. Some participants argued that CBDCs might enable new and innovative payment services for the unbanked, while others insisted that a CBDC would fail to address the root causes that keep the unbanked from using banking services.¹⁵

¹³ See, e.g., Brainard Speech *supra* note 6, ("[T]he period in the nineteenth century when there was active competition among issuers of private paper banknotes in the United States is now notorious for inefficiency, fraud, and instability in the payments system.").

¹⁴ See House of Lords Economic Affairs Committee, 3rd Report of Session 2021–22, Central bank digital currencies: a solution in search of a problem?, HL Paper 13, (Jan. 13, 2022), available at <https://committees.parliament.uk/committee/175/economic-affairs-committee/news/160221/central-bank-digital-currencies-a-solution-in-search-of-a-problem-report-published/?msclkid=2abdd5dccb8811ecac845c754b6cd7d6>

¹⁵ Unbanked households are those that do not have a checking or savings account, while underbanked households are ones that have a checking or savings account but also use alternative financial services outside the banking system, such as check cashing, money remittances, payday loans, and auto title loans. See Fumiko Hayashi and Sabrina Minhas, Federal Reserve Bank of Kansas City, "Who Are the Unbanked? Characteristics Beyond Income," ("Kansas City Fed") (June 21, 2018), at 69, available at <https://www.kansascityfed.org/research/economic-review/2q18-hayashiminhas-who-are-unbanked/>.

It is helpful to consider three obstacles that are either root causes or at least factors strongly associated with being unbanked: fees and costs, to both banks and customers; a distrust of banks; and a lack of internet access.

According to a study by researchers at the Federal Reserve Bank of Kansas City, low income—in particular, income less than \$15,000—has the strongest independent relationship with the probability of being unbanked.¹⁶ A 2019 Federal Deposit Insurance Corporation (FDIC) survey of unbanked households found that the most frequently cited reasons for not having a bank account was not having enough money to meet minimum balance requirements.¹⁷ Finally, some of our roundtable participants argued that a bank’s costs of complying with anti-money laundering (AML), countering the financing of terrorism (CFT) and Know Your Customer (KYC) regulations make it economically infeasible to provide services to unbanked individuals.¹⁸ These roundtable participants argued that a CBDC would fail to address these root causes of being unbanked.

Other experts, however, held out hope that private cryptocurrencies or a CBDC could open new opportunities for fintech innovators to offer low-cost banking or transaction payment services tailored to the needs of low-income individuals and the unbanked. A CBDC could help to foster a market environment conducive to such innovative and niche solutions. Specifically, a CBDC could help to level the playing field by lowering business costs and removing barriers. This would then encourage the entrance of innovative payment providers offering new, low-cost payment services. The emergence of such companies could provide a market solution, or at least a partial solution, to the problem of the unbanked.

Alternatively, a regulatory solution (or at least regulatory encouragement to banks) to address the unbanked might also be possible. As Vice Chair Brainard has observed, “The Federal Reserve’s proposals for strengthening the Community Reinvestment Act emphasize the value of banks providing cost-free, low-balance accounts and other banking services targeted to underbanked and unbanked communities.”¹⁹

In the FDIC survey, distrust of banks ranked as the second most frequently cited reason by the unbanked for not having a bank account.²⁰ A distrust of banks could present a challenge to

¹⁶ Id. at 67.

¹⁷ See FDIC, *How America Banks: Household Use of Banking and Financial Services, 2019 FDIC Survey* (Oct. 2020) (“FDIC Survey”) at 3.

¹⁸ For example, banks could not recover their compliance costs by cross-selling banking products to boost revenue earned from depositors. That is, banks could not spread their compliance costs over a broader base of banking services and income streams.

¹⁹ See Brainard Speech *supra* note 6 at 8.

²⁰ See FDIC Survey *supra* note 17 at 3 (“‘Don’t trust banks’ was cited by approximately one-third of unbanked households as a reason for not having an account and was the second-most cited main reason.”). It would be helpful to gain a better understanding of what motivates a distrust of banks. For example, how much of the distrust stems from perceived features of banking themselves, such as the impersonal delivery of banking services, and how much comes instead from tangential concerns, such as a fear that assets would be garnished for child support or payment of other debts, or concerns related to the person’s immigration status?

leveraging a CBDC to promote financial inclusion, given that the Paper envisions that a CBDC would be intermediated through commercial banks.

Nonetheless, it is possible that a CBDC could help to dispel at least some of the distrust. For example, users might place greater confidence in the safety of a CBDC than a regular bank account, since the former would be a direct liability of the Federal Reserve. Furthermore, the use of CBDCs could encourage the unbanked and underbanked to make greater use of transaction services in general, just as digital wallets have shown similar effects.²¹

The lack of internet access constitutes yet another impediment strongly associated with the unbanked. Among low income households, those without internet access have a much higher probability of being unbanked than those with internet access. Specifically, the Kansas City Federal Reserve study found that a low-income household without internet access has a nearly 11 percentage point greater probability of being unbanked than a low-income household with internet access, after controlling for all other characteristics. That ranked as the third-strongest association with low-income households' probability of being unbanked. The survey was conducted in June 2019, however, and access to the internet and to smartphones (discussed below) likely has improved over the past three years, alleviating some but not all of these concerns.

Other researchers have found that the digital divide in general, and the digital gender divide in particular, are particularly pronounced among the underserved.²² These divides could further hamper usage of CBDCs among vulnerable segments of the population.

Unbanked households have greater access to smartphones than to internet access, and therefore one might expect smartphones to provide an alternative channel for banking services.²³

Unfortunately, however, an analysis by researchers at the Federal Reserve Bank of Kansas City casts doubt on that hypothesis. The authors found:

The relatively weaker relationship between mobile phone ownership and banking status for low-income households suggests that promoting mobile phone ownership may not be the most effective path to promoting banking services. This may be a surprising and unwelcome finding for banks and policymakers, many of whom have promoted mobile banking as an access channel to banking services.²⁴

The authors based their analysis on data from the 2015 Federal Deposit Insurance Corporation (FDIC) Survey of Unbanked and Underbanked Households. Smartphone access among the

²¹ See, e.g., CPMI Financial Inclusion *supra* note 8 at 21 (identifying three mechanisms by which use of digital wallets could advance financial inclusion: by serving as an incentive for the use of transaction accounts; by encouraging frequent use of transaction accounts; and by filling the gaps in electronic payment acceptance in underserved rural areas).

²² *Id.* at 31 (noting that women are on average 10% less likely to own a mobile phone, and 26% less likely to use mobile internet than men).

²³ According to the 2019 FDIC Survey, 63.7% of unbanked households had smartphone access in 2019, up from 49.0% in 2015. (Among all households, the comparable percentage rose from 72.3% in 2015 to 85.4% in 2019.) See FDIC Survey *supra* note 17 at 26.

²⁴ See Federal Reserve Bank of Kansas City at 67.

unbanked has increased since then,²⁵ and it is possible that more recent data might suggest a more positive policy interpretation. Research also shows, however, that smartphone ownership rates decline for older populations and for those with lower levels of education and income. That could pose an obstacle to the use of CBDCs among these segments of the populations, to the extent that such usage depended on access to a smartphone.²⁶

Overall, the obstacles and factors associated with the unbanked raise a fundamental question: would a CBDC be inaccessible to significant portions of the underserved population?

If so, however, perhaps the obstacles could be overcome. The Kansas City Federal Reserve study, for instance, saw positive policy implications stemming from the association between a lack of internet access and the unbanked. Specifically, the study states that “interventions based on technologies such as internet access and mobile phone ownership could be more efficient and effective in promoting banking among low-income households.” We encourage the Federal Reserve and the regional banks to continue to conduct research on addressing the needs of the unbanked and underbanked.

As part of that research, researchers should review the experiences of El Salvador and the Bahamas, two nations that have introduced digital currencies. Results so far indicate that neither country has succeeded in its goals. In September 2021, El Salvador became the first country in the world to make bitcoin legal tender and required all businesses to accept it for all transactions.²⁷ In announcing the policy, the country’s president promised that it create jobs and promote financial inclusion.²⁸ The government introduced a digital wallet (the Chivo Wallet) and offered substantial incentives for citizens to download and use it. Despite these efforts—and the further incentive provided by Covid to use contactless payments—so far bitcoin has failed to gain widespread acceptance as a medium of exchange in the country.²⁹

Q5. How could a CBDC affect financial stability? Would the net effect be negative or positive?

On balance, we believe that the introduction of a CBDC would enhance financial stability by reducing the amount of money invested in money market funds and other assets that present run risks.

²⁵ See *supra* note 22.

²⁶ See U.S. House of Representatives Committee on Financial Services, Memo for June 15, 2021, Hearing, “Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion Implications of Central Bank Digital Currencies” at 5 (citing Pew Research Center, Mobile Fact Sheet, Apr. 7, 2021). See also Kansas City Fed *supra* note 15 at 66-67 (finding that mobile phone ownership was independently, though not strongly, associated with low-income households’ banking status, whereas the association with a lack of internet access had a stronger association with the unbanked).

²⁷ See Fernando E. Alvarez, David Argente, and Diana Van Patten, Are Cryptocurrencies Currencies? Bitcoin as Legal Tender in El Salvador, NBER Working Paper 29968, DOI 10.3386/w29968 (April 2022), at 1, available at <https://www.nber.org/papers/w29968>.

²⁸ *Id.* at 5 (citing remarks by President Nayib Bukele in June 2021).

²⁹ *Id.* at 26.

Depending on its design, the substitution effects of a CBDC are likely to lead to a significant migration of funds from money market funds and other non-bank vehicles into CBDCs. The attractiveness of a CBDC will be far greater if it bears interest and has no or few restrictions on supply and ownership by any one person. Even with an interest-bearing CBDC, however, banks and money market funds might be able to compete by offering higher interest rates or greater convenience. Money market funds, for example, serve as a convenient destination for entrance into and exit from other mutual funds.

Overall, however, the amount of investments in various non-bank instruments—such as money market funds, repo, and commercial paper—would likely fall significantly with the advent of a CBDC. That, in turn, would limit the impact of any future runs on such assets and thus strengthen the resilience of financial markets.

While acknowledging the substitution effect of a CBDC, the Paper nonetheless raises the possibility that a CBDC could make run risks more likely and thereby exacerbate financial stability risks.³⁰ We agree that a CBDC would provide an alternative to money market funds or other money-like instruments. A CBDC, however, would not cause a run. It would simply offer one more instrument—along with treasury bills, commercial bank deposits, and perhaps other assets—for corporate treasurers and other institutional investors and asset owners seeking to transfer their money in a flight to safety.

It is instructive to recall the dynamics that played out among money market funds leading up to and during the run in March 2020. Money market fund reforms, which were adopted by the Securities and Exchange Commission in 2014 and implemented in 2016, precipitated a sizeable migration of institutional assets from prime MMFs to government MMFs. By March 2020, publicly offered institutional prime MMFs held less than one-fourth the assets they had in September 2008. When these prime MMFs experienced a run in March 2020, the size of outflows was smaller in dollar amounts than in the run of 2008, even though the 2020 outflows were larger in percentage terms.³¹ We believe that a similar dynamic would play out with respect to non-banking instruments if the Federal Reserve introduced a CBDC.

It is also possible, perhaps likely, that a CBDC would attract investments that would otherwise flow to private cryptocurrencies or cryptoassets. Indeed, a CBDC would offer several salient advantages over a private cryptocurrency, beginning with the elimination of liquidity and credit risks and the guarantee of a reliable redemption mechanism. Private cryptocurrencies and cryptoassets currently pose a variety of potential financial stability risks, including vulnerabilities to destabilizing runs, disruptions in the payment system, and potential concentration of economic power.³² The risks became dramatically evident in mid-May, when the Terra USD collapsed (belying its name “stablecoin”), and the stablecoin Tether broke the buck before recovering. By

³⁰ See Discussion Paper *supra* note 2 at 17 (“The ability to quickly convert other forms of money—including deposits at commercial banks—into CBDC could make runs on financial firms more likely or more severe.”).

³¹ See, e.g., Report of the President's Working Group on Financial Markets (“PWG Report”), (December 2020) at 14; and the Investment Company Institute, Experiences of US Money Market Funds During the COVID-19 Crisis, Report of the COVID-19 Market Impact Working Group, (November 2020), at 29.

³² See Discussion Paper *supra* note 2 at 12 (citing the PWG report).

reducing investments in private cryptoassets and cryptocurrencies, a CBDC could further enhance financial stability and reduce systemic risks.

Finally, a CBDC could help to reduce, if not eliminate, counterparty risks and systemic risks caused by slow payment settlement times. The current processes—in which clearing and settlement can take days—builds up risk and leverage in the payment system. A real-time payment system would alleviate these risks and lead to systemic deleveraging.

That said, it is unclear that a CBDC will be needed to accelerate the payments process. Improvements may be imminent even without a CBDC. As the Paper observes, “Recent improvements to the U.S. payment system have focused on making payments faster, cheaper, more convenient, and more accessible.” The Paper specifically points to innovations in instant payments, including the RTP network (a real-time interbank payment system for lower-value payments) and the FedNow Service.³³

These anticipated innovations (along with any unanticipated ones) likely will become operational well before the introduction of any CBDC. In other words, the baseline is a moving target. An assessment of the impact of a CBDC must consider not only the current state of play, but also likely innovations leading to faster and more efficient payment systems in the near term.

Finally, it is quite possible that a CBDC would have substitution effects vis-à-vis commercial bank deposits. This raises the possibility that, *in extremis* and if the CBDC paid a sufficiently high rate of interest, a CBDC would render commercial banks unviable. Were that to happen, the real economy would suffer from the loss of credit currently provided by the commercial banking system. In addition, financial stability would be impaired, because the financial system draws resilience from the number and diversity of the multitude of commercial banks in our country. A concentration of economic power—wielded either by a far narrower set of commercial banks and non-bank institutions or by the Federal Reserve itself—would weaken the resilience of the financial system.

That said, however, the introduction of a CBDC need not materially weaken the viability of commercial banking or prevent fractional reserve lending. We discuss this further in response to Question 6 below.

Q6. Could a CBDC adversely affect the financial sector? How might a CBDC affect the financial sector differently from stablecoins or other nonbank money?

The Paper stipulates that a CBDC, if offered, would be offered on an intermediated basis, with commercial banks or other private sector intermediaries providing accounts or digital wallets to facilitate the management of CBDC holdings and payments.³⁴

³³ *Id.* at 7.

³⁴ The alternative of a disintermediated model, in which the public would have retail accounts directly with the Federal Reserve, could risk depleting the deposits upon which commercial banks rely and thus threaten their viability. To be able to continue providing loans to households and businesses, commercial banks would need to find an alternative source of funding to replace direct deposits. The Federal Reserve itself could offer one such source, perhaps through its discount window. For one account of how this might work, see John Crawford, Lev

Even with an intermediated model, as envisioned in the Paper, the introduction of a CBDC could exert greater competitive pressures on commercial banks. Such pressure could come either directly from the substitution effects of CBDCs, or else indirectly. For example, a CBDC could serve to remove barriers to new entrants, such as fintech companies and innovative payment services providers. These competitive pressures could prompt commercial banks to improve their services and raise interest rates, thus benefitting consumers. (We acknowledge, however, that competitive forces also could lead to compressed bank margins and make it more difficult for banks to provide quality services and products or undertake efforts to expand financial inclusion.)

A CBDC also could exert competitive pressures on non-bank financial providers, including money market funds and other non-bank entities that issue risky assets. While this might result in a reduction of available credit for the economy, it could also help to reduce systemic risks, as noted above.

Finally, a CBDC could have a major impact on private cryptocurrencies and other cryptoassets. This could have the positive effect of disciplining the market of crypto providers, leading to a pruning of poor-quality crypto products and issuers. To this extent, a CBDC would have a beneficial effect on both the financial system overall and the crypto industry in particular. Specifically, this disciplining effect could lead to overall higher quality and greater reliability among the surviving private stablecoins and other cryptoassets. The private market could then provide more secure operations and enjoy greater investor trust.

The impact of a CBDC would depend in large measure on its design features. For more, please see our response to Question 7.

Q7. 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?

The design of a CBDC raises such questions as (1) whether the digital money would offer interest; (2) if so, at what rate; and (3) whether the rate would vary with the amount of assets in the account. Another important design question would be whether to place a cap on the maximum amount allowed per account. A generous rate of interest could prompt commercial banks to raise the interest rates they offer on the deposits of their customers and thus would redound to the benefit of consumers. Too high an interest rate on a CBDC, however, could cause it to crowd out alternative forms of money or money-like instruments, including bank deposits and money market funds.

With a sound overall design and a well calibrated interest rate for CBDCs, it is quite possible for a private crypto market to survive and even flourish. For example, a private cryptocurrency

Menand & Morgan Ricks, FedAccounts: Digital Dollars, The George Washington Law Review, Vol. 89:113, Jan. 2021, at 143. Such an alternative, however, would entail a restructuring of the financial system in ways both profound and untested.

could compete with a CBDC on the basis of other features, such as bundled services or a competitive rate of interest.

Another key design question revolves around privacy issues. Strong safeguards and clear explanations would be needed to reassure the public and instill the confidence necessary for a CBDC to gain public acceptance.

A clear and convincing discussion of privacy issues, however, will be challenging—and made all the more so by inaccurate perceptions of current realities. Some participants in our roundtable argued that the public is unaware of the true state of privacy practices prevailing in the financial industry, which they described as surprisingly loose. According to these participants, financial institutions readily share vast troves of financial data with the government and other third parties, and yet the public has little idea of the extent of the data sharing.

If true, these practices would constitute the true baseline against which to consider the privacy guarantees of a CBDC. In practice, however, the roundtable participants feared it would be too difficult to acknowledge that reality to the public. This raises the likelihood that the public debate would measure the privacy guarantees of a CBDC against an unduly rosy perception of current private-sector privacy practices.

Q8. 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?

Reduced acceptance of cash payments would take a particularly significant toll on vulnerable segments of the populations, including the elderly, the disabled, undocumented migrants, and those with limited financial capability.³⁵ To the extent that a CBDC offered a viable alternative to cash for these population segments, it could fill a useful public policy need. Addressing this policy need would present particular challenges, however, because some of these individuals likely would have limited access to CBDCs or feel uncomfortable using them.

Q10. How should decisions by other large economy nations to issue CBDCs influence the decision whether the U.S. should do so?

“Today,” the Paper observes, “the dollar is widely used across the globe because of the depth and liquidity of U.S. financial markets, the size and openness of the U.S. economy, and international trust in U.S. institutions and rule of law.”

Technology, however, also plays a role in maintaining U.S. dollar dominance, in the view of our roundtable participants. Should the U.S. fall behind technologically, that would tend to erode the dollar’s dominance, notwithstanding the strengths that stand behind the U.S. dollar. To maintain the currency reserve status of the dollar, the Federal Reserve should ensure that the dollar enjoys

³⁵ See, e.g., CPMI Financial Inclusion *supra* note 8 at (“[W]ithout convenient access to and acceptance of cash, there is a risk that some segments will be left (further) behind, including senior citizens, individuals with disabilities, undocumented migrants, people living in, or moving out of, extreme poverty or homelessness, the inhabitants of rural and remote areas, and those with limited financial capability.”). [Internal citation omitted.]

CFA Institute Comment Letter to the Federal Reserve
RE: Money and Payments: The U.S. Dollar in the Age of Digital Transformation

the best and safest technologies with minimal frictions in payment operations and infrastructure. Technology should serve to reinforce, not vitiate, the advantages contributing to the dollar's dominance.

Some participants to our roundtables argued the U.S. has fallen behind in terms of banking process technology and infrastructure. Current initiatives, however, have the promise of alleviating at least some technological weaknesses. As noted above, these include the FedNow service expected to be launched next year. A digital dollar could further the momentum and bolster the USD's dominance, even in the face of competition both from international CBDCs and private initiatives.

Should you have any questions about our positions, please do not hesitate to contact Stephen Deane at stephen.deane@cfainstitute.org.

Sincerely,

Paul Andrews



Managing Director
Research, Advocacy and Standards
CFA Institute

Stephen Deane



Senior Director, Capital Markets Policy, the
Americas
CFA Institute

Olivier Fines



Head, Advocacy, Europe,
Middle East and Asia
CFA Institute