**BoE - New Forms of Digital Money Discussion Paper**

**Due Date:** September 7, 2021

**Instructions:** We encourage short and succinct responses, of no more than 500 words, for each question. Respondents do not need to answer all questions and are encouraged to only respond where they wish to.

<https://www.bankofengland.co.uk/news/2021/june/new-forms-of-digital-money-discussion-paper-and-summary-of-responses-to-the-discussion-paper-on-cbdc>

**Introduction to Ripple**

Using blockchain technology, Ripple allows financial institutions to process payments instantly, reliably, cost-effectively, and with end-to-end visibility anywhere in the world. RippleNet, our enterprise software solution which is powered by a standardized application programming interface and built on the market-leading and open standard Interledger Protocol, enables financial institutions to facilitate faster and less costly cross-border payments, demonstrating that deep interoperability between commercial financial institutions can make payments truly efficient, particularly in eliminating the uncertainty and risk historically involved in moving money across borders using interbank messaging alone.

In addition, Ripple offers these entities an On-Demand Liquidity capability which leverages XRP - the digital asset native to the XRP Ledger, a distributed ledger platform - as a bridge between fiat currencies, further reducing the friction and costs for commercial financial institutions to transact across multiple global markets. Although Ripple utilizes XRP and the XRP Ledger in its product offerings, XRP is independent of Ripple. The XRP Ledger is decentralized, open-source, and based on cryptography. Ripple leverages XRP for use in its product suite because of XRP’s suitability for cross-border payments. Key characteristics of XRP include speed, scalability, energy efficiency, and cost - the benefits of which will be passed on to the consumer and will help reduce friction in the market for cross border payments.

Ripple also recently announced a pilot of a private version of the public, open-source XRP Ledger (“the CBDC Private Ledger”).[[1]](#footnote-0) The CBDC Private Ledger is based on the same blockchain technology that powers the XRP Ledger, which has supported the management of billions of dollars of value for over eight years, without any significant security or operational issues. The CBDC Private Ledger can be used for both payments and issuing currencies, and by leveraging the XRP Ledger and associated RippleNet technologies, commercial financial institutions and central banks are able to make cost-effective, reliable and close to instantaneous payments, including at high volumes and for use cases such as micropayments. While the CBDC Private Ledger has been designed on the basis of an open-source solution, Ripple has adapted it for use so that central banks can run a private network, allowing complete control over the system.

With that background, Ripple is pleased to share the following responses to the Discussion Paper’s questions on public policy objectives.

**Public policy objectives**

* **How important is direct access for the general public to central bank money in a digital world?**

Ensuring public access to central bank money - whether in physical or digital form - remains an important priority. However, Ripple believes that introducing a CBDC in the UK could bring significant benefits.

Unlike cash, a CBDC could enable micropayments or otherwise be “programmed” for specific uses to support government aims or macroeconomic policy, such as delivering targeted financial stimulus support to individuals and businesses. CBDCs used for this purpose could be time-bound, made region-specific, or linked to specific industries to stimulate consumer demand and support key industries and policy outcomes like the green economy or decarbonisation.[[2]](#footnote-1)

At the same time, privately issued stablecoins may provide some immediate advantages that a CBDC cannot. As noted in a recent speech by Federal Reserve Vice Chair for Supervision Randal K. Quarles, “a global U.S. dollar stablecoin network could encourage use of the dollar by making cross-border payments faster and cheaper, and it potentially could be deployed much faster and with fewer downsides than a CBDC” (e.g., were central banks to replace commercial banks as the primary provider of money, credit could be constrained).”[[3]](#footnote-2)

To be sure, stablecoins present regulatory hurdles that must be addressed before they can be used widely. The Discussion Paper observes that for stablecoins to endure, they “must promise, credibly and consistently, to be fully interchangeable with existing forms of money” to “ensur[e] that users have the same confidence in stablecoins as commercial bank money.”[[4]](#footnote-3) Vice Chair Quarles echoed these concerns, noting that different factors, including where “a fractional rather than full reserve” exists or “the stablecoin holder does not have a clear claim on the underlying asset,” create the risk “that some triggering event could cause a large number of stablecoin holders to exchange their coins all at once for other assets and that the stablecoin system would not be able to meet such demands while maintaining a reasonably stable value.”[[5]](#footnote-4)

But “these concerns are eminently addressable.”[[6]](#footnote-5) We believe there is a place for reliance on both physical and digital currency (whether issued by the Bank of England or a private sector provider) and use of one need not preclude the other where “proportionate and risk-based”[[7]](#footnote-6) controls are in place.

Finally, should the Bank of England ultimately decide to issue a CBDC, we feel the utilization of a private-public platform approach is the best way to ensure maximum functionality. The more open and extensible the payments platform, the more utility it will deliver. Broad utility - and interoperability - will define success for CBDCs.

Firms like Ripple are well positioned to innovate to solve the interoperability challenges that development of such a platform could ultimately create. RippleNet is a network of financial institutions using Ripple technology to enable faster, lower-cost payments around the world. The technology and network rules enable enhanced interoperability between these financial institutions, driving the benefits of the global network. Alignment of protocols across CBDCs (including any that are ultimately issued by the Bank of England), private stakeholders and cross-border payment networks could enable similar benefits associated with RippleNet for end-to-end global transactions - real-time, 24x7, atomic settlement based on efficient routing, transparently and immutably associated with a universal set of payment information.

* **Do you agree with the Bank’s view on protection and privacy? What would you regard as a minimum set of protections?**

As the Discussion Paper acknowledges, widespread implementation of either a CBDC or stablecoin will involve a range of actors (e.g., the issuer (including the central bank in the case of a CBDC), the wallet provider, the sender and recipient, and any third party intermediary), implying a host of data and privacy concerns given the “advanced analytics and bigger data sets” involved.

We agree with the Bank of England that “failure to meet users’ reasonable expectations of privacy would be detrimental for confidence and trust in money and payments.”[[8]](#footnote-7) Depending on how they are issued, CBDCs may require central banks to take on additional operational tasks such as “know your customer” analysis, leaving them responsible for protecting large troves of sensitive financial information. Notwithstanding the Discussion Paper’s assertion that a central bank could place a “greater priority” on “providing users with money that offers privacy, trust, or greater accountability” than private sector providers, governments are not immune to hacks or other unauthorized disclosures. As recently as December 2020, for example, the U.S. Department of the Treasury suffered a “significant cyber incident” that reached the top levels of Treasury leadership.[[9]](#footnote-8) Accordingly, it is important that CBDC creation be paired with robust data and privacy protection measures to ensure that any customer information gathered be specifically tailored to the risk being addressed and safeguards are implemented to prevent unwarranted dissemination.

We recognize it is important to ensure that a CBDC is not used for illicit purposes. At the same time, we believe that maintaining user privacy (including protection of customer data) is key to ensuring continued confidence and trust in money and payments. Should the Bank of England be able to balance these objectives, we believe a CBDC might well bring many unbanked or underbanked people into Britain’s financial system for the first time.

The Discussion Paper observes that there are currently 1.2m unbanked people in the UK - equivalent to roughly 1.4% of the UK population in 2019-2020[[10]](#footnote-9). Given the proportion of unbanked people in the UK has declined from 7.39% in 2002-2003, and this downward trend looks set to continue as card and contactless payments become more prominent, Ripple believes CBDCs - for which only a smartphone is needed to access - could provide consumers with an easy and secure way to access central bank money and financial services.

* **What steps could be taken, and by whom to help promote interoperability of new forms of digital money with other payments systems, and thereby foster a competitive environment?**

Ripple believes that interoperability - achieved through alignment of national payment protocols and adoption of international standard protocols - will ultimately be core to any successful CBDC design and help avoid creating a closed loop system.

Ripple itself applies protocols to drive the efficient globalization of value through multiple initiatives with financial services and open source communities. RippleNet, our enterprise software solution which is powered by a standardized application programming interface (API) and built on the market-leading and open-standard, Interledger Protocol, enables financial institutions to facilitate faster and less costly cross-border payments, demonstrating that deep interoperability between commercial financial institutions can make payments truly efficient, particularly in eliminating the uncertainty and risk historically involved in moving money across borders using interbank messaging alone. We recently announced as well the pilot of a private ledger for central banks considering CBDCs (“the CBDC Private Ledger”).[[11]](#footnote-10) The CBDC Private Ledger can be used for both payments and issuing currencies; by leveraging RippleNet technologies and the Interledger Protocol, commercial financial institutions and central banks are able to make cost-effective, reliable and close to instantaneous payments, including at high volumes and for use cases such as micropayments. While the CBDC Private Ledger has been designed on the basis of an open-source solution, Ripple has adapted it for use so that central banks can run a private network, allowing complete control over the system.

We believe that similar design choices, including use of standardized APIs, will help facilitate widespread adoption of CBDCs and strengthen the case for their global usage. Relatedly, we expect there will be many different wallets and wallet providers for digital money users (e.g., consumers, merchants, businesses) to choose from. While such digital wallets could be used to enable peer-to-peer or wallet-to-wallet payments, we agree that infrastructure will need to be put in place and must provide for, among other things, consumer protection, fraud prevention, authentication and authorization.

We thus agree with the Discussion Paper’s twin assertions that “[a]ny infrastructure would need to consider technology and data standards so that information could be exchanged seamlessly between the different systems involved” and “[d]eveloping any new infrastructure that is fully interoperable would need private sector participants to be fully engaged.” Creation of a task force that involves the public and private sectors collaborating together to exchange ideas and test solutions - whose efforts are informed by the work occurring on an international level, including by the G7, G20, FSB, and IOSCO - seems most likely to yield success.

Ultimately, we believe that private sector solutions - such as the use of neutral bridge assets like XRP, supported by software solutions like the CBDC Private Ledger - could have an important role to play in supporting healthy liquidity markets that allow for frictionless and cost-effective value movement between new forms of digital money in real time, enabling the exchange of less liquid digital money pairs, and increasing competition by lowering entry barriers to new and smaller market participants. An open platform approach bringing together expertise and investment from different stakeholders including private sector firms, governments and academia provides the best opportunity to build value-adding services without friction from intermediaries.

1. *See* <https://ripple.com/lp/cbdc-whitepaper>, Ripple Report: The Future of CBDCs [↑](#footnote-ref-0)
2. *See* “[CBDCs Unlock Endless Fiscal Policy Options](https://ripple.com/insights/cbdcs-unlock-endless-fiscal-policy-options/)” for further examples of programmable money uses. [↑](#footnote-ref-1)
3. Vice Chair for Supervision Randal K. Quarles, “[Parachute Pants and Central Bank Money](https://www.federalreserve.gov/newsevents/speech/quarles20210628a.htm).” [↑](#footnote-ref-2)
4. Bank of England, “[New forms of digital money](https://www.bankofengland.co.uk/paper/2021/new-forms-of-digital-money).” [↑](#footnote-ref-3)
5. “[Parachute Pants and Central Bank Money](https://www.federalreserve.gov/newsevents/speech/quarles20210628a.htm).” [↑](#footnote-ref-4)
6. *Id.*; *see also* “[New forms of digital money](https://www.bankofengland.co.uk/paper/2021/new-forms-of-digital-money)” (“Establishing a secure regulatory environment for stablecoins to operate within the UK would also lay a clear foundation for sustainable innovation and allow consumers to realise safely the benefits they may offer.”) [↑](#footnote-ref-5)
7. “[New forms of digital money](https://www.bankofengland.co.uk/paper/2021/new-forms-of-digital-money).” [↑](#footnote-ref-6)
8. “[New forms of digital money](https://www.bankofengland.co.uk/paper/2021/new-forms-of-digital-money).” [↑](#footnote-ref-7)
9. Department of Homeland Security, Joint Statement

by the FBI, CISA, and the ODNI, Dec. 17, 2020, available at

https://www.dhs.gov/news/2020/12/17/joint-statement-fbi-cisa-and-odni [↑](#footnote-ref-8)
10. HMT [Financial Inclusion Report 2019-2020](https://www.gov.uk/government/publications/financial-inclusion-report-2019-2020). [↑](#footnote-ref-9)
11. *See* <https://ripple.com/lp/cbdc-whitepaper>, Ripple Report: The Future of CBDCs [↑](#footnote-ref-10)