



CBDC

Central bank digital currencies: executive summary

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Bank of Canada
European Central Bank
Bank of Japan
Sveriges Riksbank

Swiss National Bank
Bank of England
Board of Governors Federal Reserve System
Bank for International Settlements

A group of central banks, together with the Bank for International Settlements, are working together to explore central bank digital currencies (CBDCs) for the public (“general purpose” or “retail” CBDC).¹ This executive summary summarises progress made since publishing a report in October 2020 setting out the common foundational principles and core features of a CBDC.² Alongside this executive summary, three detailed reports have also been published.

Motivation

The centrality of central bank money in a monetary system anchors public trust in money and supports public welfare. As history has demonstrated, the evolution of money and payments delivers new opportunities and business models, alongside new challenges. Our economies are becoming increasingly digital, user needs are rapidly evolving, and innovation is reshaping financial services. Many of our jurisdictions are seeing falling transactional use of cash, and new forms of digital money issued by the non-bank private sector (such as stablecoins) are emerging. These developments have accelerated since the onset of the Covid-19 pandemic. Today, central banks are exploring how they can continue to deliver their public policy objectives, ensuring they are able to respond to a future system that appears to be changing rapidly.

A CBDC robustly meeting the foundational principles envisaged by this group could be an important instrument for central banks in such a future to enhance financial stability, harness new technologies and continue serving the public.

As money and payments develop rapidly, central banks’ plans for CBDC will evolve. CBDC issuance and design are sovereign decisions. Whether or not to issue a CBDC, and its design features, are sovereign decisions for relevant authorities based on their assessments and a jurisdiction’s circumstances. To date, none of our jurisdictions has yet decided to proceed with a general purpose CBDC, which is one option within a wider set of open possibilities for central banks.

International cooperation on CBDC could provide an avenue for improving cross-border payments. This group’s work has been focused on domestic explorations of CBDC. Yet beyond this group there are valuable insights being generated in other fora which will contribute to our collective understanding and respective evaluation of CBDCs. The ongoing work under building block 19 of the G20 roadmap to enhance cross-border payments has highlighted the potential for CBDCs to enhance the efficiency of cross-border payments for countries working together. Facilitating international payments with CBDCs may be achieved through systems with different degrees of interoperability or cooperation. As more central banks begin to consider issuance of CBDC, the practicalities of implementing such arrangements will be important areas for research, as will their macro-financial implications, where the IMF would have an important role to play.

Finally, CBDCs would be likely to have wide-ranging impacts on public policy issues beyond a central bank’s traditional remit.³ Broad engagement and cooperation will play a key role in central banks’ future CBDC deliberations.

¹ Participating central banks are: Bank of Canada, Bank of England, Bank of Japan, European Central Bank, Federal Reserve, Sveriges Riksbank and Swiss National Bank.

² Group of central banks, *Central bank digital currencies: foundational principles and core features*, October 2020.

³ G7 Finance Ministers and Central Bank Governors Communiqué, June 2021.

Continuing our collaborations, we are publishing three reports, whose key messages are summarised below:

1. [System design and interoperability](#);
2. [User needs and adoption](#);
3. [Financial stability implications](#).

Key messages

To be effective, a CBDC system would need to involve both public and private actors to ensure interoperability and coexistence with the broader payment system.

The central banks contributing to this report anticipate any CBDC ecosystem would involve the public and private sectors in a balance, in order to deliver the desired policy outcome and enable innovation that meets users' evolving payment needs. Depending on the priority motivations for a CBDC, there would be multiple considerations involved in allocating roles individually and collectively, requiring extensive dialogue with users and stakeholders. Yet a theme that cuts through almost every consideration is interoperability. Domestic interoperability would be key to ensuring a CBDC system coexists with other national payment systems and contributes to broader accessibility, resilience and diversity.

For CBDC systems, domestic interoperability would need to be sufficient to achieve an easy flow of funds to and from other payment systems and arrangements. Central banks would have options in how they achieve interoperability, from use of established messaging, data and other technical standards to building technical interfaces to communicate with other systems. Yet barriers to interoperability would likely exist, covering technical, commercial and legal aspects. Dialogue with stakeholders would be key in addressing these.

Regardless of the design, developing and running a CBDC system would be a major undertaking for a central bank. Operating CBDC ecosystem functions would be a significant undertaking and any outsourced functions would need to be carefully managed to deliver public trust in a CBDC system. Likewise, individual and collective oversight of those functions and services provided or operated by private intermediaries would be required.

Access to and treatment of payment data would play a significant role in any ecosystem design. Privacy considerations could create a series of other design and interoperability challenges, ranging from the messaging standards used, how to create incentives for diverse intermediaries to offer services, and how to interoperate with traditional systems that require detailed account and transaction information.

Involving both public and private actors would also help a CBDC to anticipate the needs of future users and incorporate related innovations.

CBDC adoption would likely be driven by its future usefulness to users and acceptance by merchants. Central bank money is the safest form of money available. Yet beyond security, other valuable features of CBDC could include lower cost to consumers and merchants, offline payments, a higher level of privacy in comparison to commercial options, and multiple accessibility features.

A CBDC would need to anticipate the needs of future users and incorporate related innovations. Central banks might accommodate evolving user needs by designing a flexible core system,

supporting a diverse ecosystem of intermediaries delivering choice, competition and innovation. As payments become increasingly integrated into digital living, a CBDC available to innovators could combine innovative payment features into a single product in a new and unique way.

Strategies for CBDC adoption would need to be tailored to the diverse economic structures and payment landscapes in individual jurisdictions, but experience points to some common factors. Specifically, adoption may be more successful if it fulfilled unmet user needs, achieved network effects, and were implemented with the use of existing, accessible technology and infrastructure (eg at the point of sale). Additional measures that some jurisdictions might consider for a potential CBDC adoption strategy include the use of CBDC by public sector authorities, requiring some minimum level of acceptance, and supporting future payment needs. Not all strategies would be desirable in all jurisdictions.

A CBDC adoption strategy in a fast-changing payments landscape would require balancing the needs of the majority of consumers with reaching smaller parts of the population. Different users and needs would need to be defined and addressed in the system's design. The analysis of specific market segments through user personas and stories could provide an important method for investigating user needs and designing informative consultations with prospective end-users.

To help maintain safety and stability, a CBDC would need careful design and implementation, allowing time for the existing financial system to adjust and flexibility to use safeguards.

CBDCs would have implications for financial intermediation and would need careful design and implementation; but our analysis suggests the impacts on bank disintermediation and lending could be manageable for the banking sector. A significant shift from bank deposits into CBDCs (or even into certain new forms of privately issued digital money) could have implications for lending and intermediation by the banking sector. However, our analysis also suggests that these impacts would likely be limited for many plausible levels of CBDC take-up, if the system had the time and flexibility to adjust. This initial assessment is subject to uncertainties over the future structure of the financial system, the design of a CBDC and its underlying system, the size and scale of user adoption of CBDC and differences between jurisdictions.

We note that the financial system is dynamic and evolving and has successfully navigated episodes of structural change over many years. Additionally, private sector developments may generate similar deposit substitution risks, irrespective of CBDC and the introduction of CBDC may generate additional innovative opportunities for banks and other financial intermediaries. Central banks would have to carefully consider how they would manage these impacts, particularly through any transition phase for CBDC.

However, additional risks to financial stability might arise if changes in the structure of the financial system due to the adoption of a CBDC were to be abrupt. Impacts would also depend on the extent of the offsetting increase in lending to the real economy by non-bank financial intermediaries. CBDC and certain new forms of digital money could also increase the latent risk of systemic bank runs. This risk is reduced in the existing system through effective banking regulation, deposit insurance, and resolution frameworks.

Central banks are exploring safeguards that could be built into any CBDC to address financial stability risks; although such measures may need careful consideration before they were used. Central banks might consider measures to influence or control CBDC adoption or use. This could include measures such as access criteria for permitted users, limits on individuals' CBDC holdings or transactions, and particular choices around CBDC remuneration. Such measures could be valuable in managing risks in any transition were a CBDC to be introduced and could potentially have a role on a longer-term basis in some jurisdictions. However, such measures would also bring challenges. The design

of any measures would likely need to balance moderating the risks from high and/or rapid take up of CBDC with other policy objectives associated with a meaningful level of usage. In some cases, there could be legal and public policy issues to consider. For example, there might be some measures that may face obstacles to public understanding and acceptance.

Next steps

Trusted and resilient money is a precondition for monetary and financial stability. This group will continue to collaborate on exploring how CBDCs could enhance any future system.

Specifically:

1. The group will continue its practical policy and technical analysis, exploring the intersections between the three papers published and common areas of interest in CBDC research.
2. The group will continue contributing to other complementary international work on CBDCs and the future of payments, including the G7 Digital Payments stream, the G20 cross-border payments roadmap, the CPMI Future of Payments Working Group, and the IMF's work on digital money.
3. The group will strengthen outreach and dialogue, domestically and internationally. Individually, we are fostering an open and informed dialogue on CBDC in our jurisdictions; and collectively, we are sharing insights from our work with other central banks, including in developing economies.

Annex: Steering group members

Co-chairs

Bank for International Settlements	Benoît Cœuré
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