Central bank digital currencies: a new tool in the financial inclusion toolkit?

Executive summary

Central banks are actively considering how retail central bank digital currencies (CBDCs) may fit with policy goals around financial inclusion. In the second half of 2021, authors at the BIS and the World Bank interviewed nine central banks at various stages of exploring retail CBDCs and financial inclusion. These are the Central Bank of The Bahamas, Bank of Canada, People's Bank of China, Eastern Caribbean Central Bank, Bank of Ghana, Central Bank of Malaysia, Bangko Sentral ng Pilipinas, National Bank of Ukraine and Central Bank of Uruguay. While a CBDC, like other forms of money, has different functions (eg means of payment, store of value, unit of account, settlement asset), its link to financial inclusion is in the context of its payment properties, and hence it is the lens through which CBDC is discussed in this paper.

The interviewed central banks take the view that, while CBDC is not a panacea, it can represent a further tool to promote financial inclusion if designed with this goal. The paper explores this theme, outlining findings in three main areas: (i) existing barriers to financial inclusion that could be addressed with the introduction of a CBDC; (ii) CBDC design features that many jurisdictions view as critical to addressing these barriers; and (iii) the challenges foreseen, along with legal and regulatory changes needed for CBDC implementation.

Barriers to financial inclusion differ across countries, but there were some common elements that came out in the interviews. These can be grouped into six main areas. First are geographic barriers related to vast territories and remote locations. Second are institutional and regulatory factors, such as a lack of public goods like identity credentials, as well as informality and a lack of consumer protection. Third are economic and market structure issues, including limited competition, inefficiency in the financial sector and a lack of profitability of serving excluded groups. Fourth are characteristics of vulnerability, such as barriers by age, gender, income or disability status like visual and hearing impairments. Fifth is a lack of education and financial literacy, and sixth is low trust in existing financial services.

Some central banks consider CBDCs as key to their mandate as a catalyst for innovation and economic development. While access to payment services has grown in recent years, it is still far from universal. Low-income populations and those living in remote locations continue to confront barriers to digital payments. Domestic retail payment services can be expensive, and payments across borders – particularly for low-value transfers like remittances – face even larger challenges. CBDCs can secure the continuous provision of public money to the general public. With CBDCs, central banks can help to speed up digital payment adoption, particularly when market size and profit potential are insufficient to motivate private sector innovation, or when established oligopolies prevent entry. Some central banks argued that they have a role to play in applying innovation to specific access challenges. As such, given the expanding yet uneven access to payment services, they recognise the importance of pursuing CBDC issuance.

Several central banks see CBDC more as a potential complement to existing financial inclusion initiatives. Many jurisdictions are tackling financial inclusion barriers today with dedicated strategies to improve the provision of transaction accounts and other payment products. The entry of non-banks and agent-based models, risk-based and proportionate customer enrolment processes, effective use of data and interoperability remain relevant. Authorities are already expanding the network of readily available access points and developing tools to improve awareness of transaction accounts and digital money, including by promoting financial and digital literacy. Central banks are also modernising existing payment infrastructures with the introduction of fast payment systems and leveraging high-volume recurrent payment streams. Several central banks noted that these actions, if implemented effectively, would be the most direct means to tackle financial exclusion. These are in line with the Committee on Payments and Market Infrastructures and World Bank guiding principles of payment aspects of financial inclusion (PAFI).

The central banks that see greater potential for CBDCs to enhance financial inclusion noted several specific design features. These design features target four broad objectives that, in turn, address specific financial inclusion barriers.

- **Promoting innovation in the two-tiered payment system.** This can be achieved through architectures that involve private sector retail services (as in existing systems), including new (non-bank) actors, and by revisiting rules on authorised access.
- **Offering a robust and low-cost public sector technological basis and novel interfaces.** CBDCs can be designed as a public sector-led basis for private sector innovation. This may include providing low-cost CBDC payment services with fees set by the central bank. CBDCs may use open application programming interfaces to share data with appropriate safeguards, such as separating transaction and personal data. CBDCs could support technological solutions with offline functionality (ie when mobile connectivity or even electricity are unavailable).
- **Facilitating enrolment and education on CBDC.** This involves the application of simplified due diligence processes to enrol individuals and micro-enterprises, remote registration or electronic know your customer (e-KYC), integration with national digital ID systems, merchant acceptance of CBDC, enabling access to special groups with limitations and giving users control of their data to support the building of a financial record. These should be accompanied by targeted digital and financial literacy campaigns.
- **Fostering interoperability among multiple dimensions.** This entails integrating CBDC with existing payment instruments like credit transfers, payment cards and mobile money. It requires interoperability with other cross-border CBDC systems and with government payment and collection streams.

Obtaining buy-in from stakeholders and safeguarding data privacy were highlighted as two major challenges. Buy-in from all key stakeholders, including those currently not reached by formal financial services, must be achieved if CBDC issuance is to have the intended impact. The more individuals, merchants and financial intermediaries that can be onboarded and sustainably participate in the system, the more attractive the use of CBDC will be to further users. This will entail decisions on a number of key issues, including pricing of CBDC services. Moreover, complementary initiatives may need to address obstacles such as limited financial and digital literacy. Similarly, safeguarding data privacy and preventing the misuse of consumer data will be essential to ensuring the same level of public trust in the CBDC that other forms of central bank money, such as physical cash, enjoy. One promising approach is to separate individual transaction data from identity information, and to engineer privacy by design.

CBDC issuance may require new laws and regulations to be enacted, or existing laws to be revised. These include central bank laws to provide the appropriate powers to issue CBDC and oversee the CBDC ecosystem. Similarly, issuance may require introducing new, or revising existing, laws for effective oversight of relevant CBDC participants, whether existing or new players undertaking similar or novel roles under the CBDC system. Relevant thematic laws, such as those for data privacy and anti-money laundering / combating the financing of terrorism (AML/CFT), may need to be re-examined to assess their continued relevance in the context of CBDCs. In addition, other relevant laws may need to be changed to legally recognise CBDC as an asset, including laws pertaining to taxation, property foreclosure and disposal of electronic wallets in bankruptcy. There may need to be criminal laws that provide legal protection for the possession of CBDCs, as with cash today.