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Conclusion[1]

Facebook's project to develop a global *stablecoin* has been a wake-up call for national and international authorities, driving central banks and international bodies to intensify the research and development phase around central bank digital currencies (CBDCs). When discussing CBDCs, this study refers to a general purpose CBDC that has specific characteristics: (1) it is a central bank liability, so the holder of CBDC would in principle expect that the central bank will redeem the money with cash upon request; (2) it is denominated in an existing unit of account, in most cases 'pegged' to the fiat currency issued by the central bank; (3) it serves as a medium of exchange and a store of value, which could be remunerated; and (4) it is in principle exchangeable at par with no exchange fees, although, there could be transaction or service fees claimed by the central bank or the service providers.

CBDCs are likely to be introduced in the near future. From being a theoretical concept, CBDCs seem to have rapidly become an inevitable innovation. More than 80 per cent of central banks surveyed by the Bank for International Settlements (BIS) declared that they are engaging in CBDC projects and some of them have already started pilot experiments.[2] Countries are carefully evaluating the implementation of CBDCs because this innovation, in addition to important benefits, can also lead to remarkable risks and challenges. In order to assess the risks and benefits of a CBDC in a given country, central banks need to acknowledge the differences across business sectors, in the stages of development and socio-economic contexts, which all play key roles in driving the success or the failure of specific payment and financial market models. CBDCs present an opportunity to develop a more secure and efficient financial system than the current one by reshaping the underlying technology. The underlying technology of a CBDC system will be the foundation that will define how the rest of the financial market will work from a technical perspective. This innovation, however, also raises a set of legal concerns. Depending on the design that such a CBDC will take, the current laws and regulations could require some degree of

1 Conclusion has been developed and shared upon by all the authors of the volume.
2 Raphael Auer, Giulio Cornelli and Jon Frost, 'Taking Stock: Ongoing Retail CBDC Projects', in *BIS Quarterly Review*, March 2020, p. 97–98, https://www.bis.org/publ/qtrpdf/r_qt2003z.htm.

adjustment to properly frame this kind of transaction – in relation to the legal implications on legal tender and consumer protection, for example.

Considering the relevant factors involved, countries should decide, according to their own specific requirements, which unique balance of design and relative implications could help to meet their goals. CBDCs could greatly improve the existing domestic and global payment and financial systems but also have far reaching implications. Their effects may blur the boundaries of the structure of financial markets, giving rise to major macroeconomic and political impacts.

CBDCs could lower transaction costs while improving the speed of transactions, ultimately enhancing the efficiency of a domestic payment system. CBDCs could also potentially help in decreasing the high transaction costs associated with cross-border payments and international remittances. Furthermore, CBDCs could promote greater financial inclusion, establishing a more inclusive banking system with cheaper and easier access to financial services while helping the creation of basic financial identity. Today, more than 1.7 billion people lack access to a bank account.[3] CBDCs could also promote widespread interoperability, linking incumbent financial institutions, fintech industry and mobile money providers with central banks and governments. No central bank has proposed to fully replace physical cash, promoting instead a coexistence between cash and CBCD. However, if implemented incorrectly, CBDCs could exclude social groups for whom cash is the only instrument available, further marginalizing them.

The development of CBDCs could also counterbalance the progressive expansion of cashless payment alternatives provided by private players, which are reducing the demand for cash and ultimately penalizing the use of central bank money. This megatrend could impact on the effectiveness of monetary policy and have implications for financial stability. CBDCs could then both reduce the market power of large private payment providers and enable the general public to access central bank money even if cash declines.

A CBDC could be an important instrument for central banks to deliver their public policy objectives. A remunerated digital currency could also be a powerful tool to improve the transmission mechanism of monetary policy. Interest rate changes would immediately be transferred to account balances and, in time of crisis, it would become easier to break the 'zero lower bound' constraints and

3 Asli Demirgüç-Kunt et al., *The Global Findex Database 2017. Measuring Financial Inclusion and the Fintech Revolution*, Washington, World Bank, 2018, p. 4–5, https://globalfindex.worldbank.org.

facilitate helicopter money. However, CBDC systems could challenge the technical capacity of central banks, even when a significant portion of these operations is outsourced, increasing operational and reputational risks.

Yet, depending on the interest rate policy design, CBDCs could compete with commercial bank deposits, increasing the risks of systemic instability. There is a risk of progressively eroding margins and increasing the cost of bank funding, which could lead, eventually, to higher rates on loans. Moreover, in extreme situations, there could be a risk that CBDCs would ease a running out of bank deposits into CBDC. The degree of the private banking industry's crowding out and its effects depend, however, on the design of a CBDC. Some of the current pilot experiments and proposed models in theory involve a two-layer architecture. This would imply that there is a basic functional layer of the CBDC itself on which a second layer is built, managed by private financial institutions that interface with consumers. Other experiments, instead, promote a token-based and one-tier system CBDC, meaning that central banks would directly distribute a CBDC accessible to everyone.

A key issue will be the degree of privacy and anonymity that a CBDC system can and should incorporate. The shift from physical cash to CBDCs will alter the current information asymmetry between governments and individuals. On the one hand, CBDCs could improve the efficiency of rules aimed at AML and tax evasion. Moreover, central banks are not profit-driven, they do not monetize the data they gather, as private corporations could potentially do through the introduction of private digital currencies. On the other hand, CBDCs could provide public authorities with a concentration of personal information which could lead to abuses and, with autocratic governments, to the limitation of personal freedoms. CBDCs could be technically designed to blind or regulate regulators' visibility into CBDC transactions.

CBDCs also have the potential to challenge the dominant role of the US dollar in international transactions. However, if China does not move forward in the direction of a more transparent and open financial market, a digital renminbi may not gain significant international attraction. Similarly, if the EU does not complete a capital market union, a banking union and further reforms to improve the governance of the monetary union, a digital euro is not likely to have the firepower to compete with the US dollar. Moreover, it will be interesting to observe if regional digital currencies (for example, the South African rand, the Brazilian real, the Saudi Arabia riyal or the Russian ruble) could take traction and substitute international reserve currencies in certain transactions.

In view of the technical, regulatory, economic and political challenges and implications, the introduction of CBDCs cannot be rushed. CBDCs are part of a wider transformation of the financial sector, driven by the digitalization of our society. For CBDCs, a more coordinated international effort is required to set standards, rules, practices and regulations to develop a common framework to maximize the benefits of CBDCs and minimize the risks. In this phase of intense evaluation and research on CBDCs, international cooperation is key. And so, in order to adopt a broad and inclusive perspective, the current discussion on the development of CBDCs must include stakeholders other than financial and international regulators – such as technological companies and civil society.

The challenge, in short, is to ensure that the introduction of CBDC will help to improve the global economy and achieve a more inclusive society.

References

Raphael Auer, Giulio Cornelli and Jon Frost, 'Taking Stock: Ongoing Retail CBDC Projects', in *BIS Quarterly Review*, March 2020, https://www.bis.org/publ/qtrpdf/r_qt2003z.htm

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