# Central banks and digital currencies: a major challenge not without its difficulties

When we think of the main challenges facing central banks in the medium term, we have no choice but to talk about digital currencies. More specifically, we must address the possibility of central banks issuing their own digital currency (so-called central bank digital currencies, or CBDCs). What stage are we currently at? Are CBDCs an option that is making headway and, if so, how should they be designed?

These questions are particularly pertinent today. After all, a lot has happened since our last articles of the *Monthly Report* on this topic.[1] In this year and a half, there have been two highly relevant events for the subject matter in question.

Firstly, central banks have assimilated that private cryptocurrencies such as Libra may become a reality and that, if widely used, they would erode the central bank's capacity to influence the supply of money and interest rates.[2] Secondly, the pandemic may have accelerated the trend of using less cash. Indeed, according to a recent ECB study, 41% of respondents say they have used it less during the pandemic, and the vast majority expect to continue to pay less in cash after the pandemic has passed.[3] A third factor to consider is the fact that if CBDCs begin to emerge in other jurisdictions as a result of this scenario, many central banks would also consider issuing their own in order to prevent their currency from losing importance.

### The central banks are gathering pace: the evidence

The message in this article is clear: in this ever-changing context, central banks have taken a major step forward in the past year and a half, and are now seriously considering the possibility of issuing a digital currency in the future.

Some figures can serve to illustrate this change. According to a study by the Bank for International Settlements (BIS),[4] in 2020, 60% of central banks were experimenting with digital currencies (42% in 2019) and 14% were already developing pilot schemes (half in 2019).

On the other hand, we have conducted a textual analysis on the tone of the ECB's and the major euro area central banks' discourse on digital currencies between 2017 and 2020. The results show a marked improvement in tone over this period (see first chart).

**Euro area: tone of central banks' discourse regarding digital currencies**

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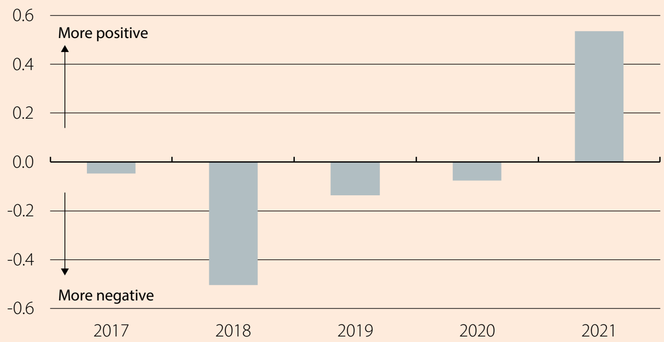


***Notes:*** ** Based on an analysis of the 28 discourses of the ECB and the main European central banks on the topic of digital currencies during this period. The index measures the number of positive words on the subject as a percentage of the total number of both positive and negative words (standardised by subtracting the average and dividing by the standard deviation), based on a textual analysis.*
***Source:*** *CaixaBank Research.*

This change in central banks' perceptions is highly significant, although it does not necessarily mean the major central banks are about to issue digital currencies in the short term. In fact, 60% of central banks rank the chances of them issuing a CBDC in the short or medium term as unlikely.

### Challenges in designing a CBDC and most likely scenarios

Currently, the ECB and the rest of the advanced economies' central banks are looking very closely at the pros and cons of CBDCs and how to design them optimally.

The two main arguments mentioned by advanced-country central banks in favour of eventually issuing a CBDC are to strengthen the payment system with a new agile and digital instrument, and to offset the reduced use of cash with a new form of risk-free currency which is issued by central banks and easy to use, while also serving as an alternative to cash if disruptions were to occur in existing digital payment infrastructures. In this regard, in order for it to be an attractive alternative to cash, it should be easy

1. See the articles in the Dossier of the MR10/2019.
2. For a detailed argument, see the article «The e-monetary policy of the new digital economy» in the Dossier of the MR10/2019.
3. See ECB (2020). «Study on the payment attitudes of consumers in the euro area (SPACE)». December.
4. See C. Boar and A. Wehrli (2021). «Ready, steady, go? Results of the third BIS survey on central bank digital currency». BIS Papers no. 114.

for most people to use, for instance with digital wallets, and should cover a wide range of relevant uses. In contrast, in emerging economies the main drivers are related to financial inclusion; a prime example is the digital currency issued in the Bahamas to facilitate the financial inclusion of a country of 390,000 inhabitants spread over 30 islands, many of them remote.

***Motivations for issuing digital currencies***

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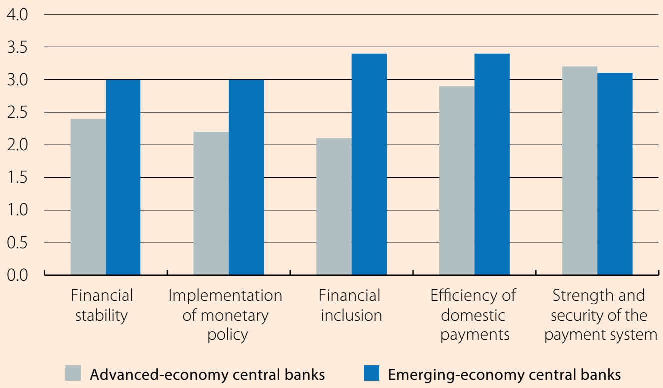


***Nota:*** *The index takes discrete values between 1 («not very important»), 2 («fairly important»), 3 («important») and 4 («very important»).*

***Source:*** *BIS survey analysed in C. Boar and A. Wehrli (2021). «Ready, steady, go? - Results of the third BIS survey on central bank digital currency». BIS Papers, no. 14.*

Speaking of emerging economies, China deserves a special mention in this article, as it is one of the countries with a more advanced pilot scheme. In 2020 it began testing the use of a digital currency for general usage in four cities, including the dynamic city of Shenzhen, and the test is expected to extend to Beijing in 2021. While there is still no specific date for a definitive issue nationwide, the Chinese monetary authorities have appeared to be in favour of CBDCs; if it ends up materialising, it would have long-standing implications for the use of cash in a highly digitalised society and for the diversification of the mobile payment system, currently dominated by two companies – Alipay and WeChat Pay – which hold 94% of this market.

At the European level, last October the ECB issued a detailed report[5] which offers some clues as to what kind of CBDC they would consider desirable. In particular, it would be a digital currency intended to serve as an alternative to cash, but it does not aspire to replace it entirely. The central bank would be the issuer and would hold the new currency on its balance sheet, but a set of private entities would be responsible for customer interaction and innovation (the natural candidate would be the commercial banks). Following a public consultation process to gather opinions on a possible «digital euro», during 2021 the ECB is expected to take an official decision as to whether it will begin taking formal steps towards the issuance of a digital euro.[6]

The main risk to be taken into consideration is the impact that CBDCs could have on the cost of credit and financial stability if they are perceived as substitutes not only for cash, but also for deposits. If this were the case, the decline in the volume of deposits would tend to increase the cost of credit, and in times of uncertainty there could be deposit flight in favour of CBDCs, which could lead to episodes of financial instability. The ECB is aware of the risks, and some of the ideas it has put forward include: limiting the balance that can be held in digital euros,[7] offering a staggered remuneration that is less attractive after exceeding a certain threshold in order to discourage it from becoming an investment tool, or placing limits on the sum of the payments that can be made with the CBDC per transaction or in a certain period. However, there are no definitive recipes for addressing these risks.

Finally, on anonymity, it seems that the ECB and the other advanced-economy central banks would advocate offering a certain degree of privacy that would allow the digital currency to be somewhat equivalent to cash, albeit with limits on the amounts in order to comply with the regulatory framework for the prevention of money laundering and the financing of terrorism, as well as to avoid excessive capital flows.

A final and not insignificant challenge posed by CBDCs is the possibility that they could entail coordination issues and impose externalities on other economies, especially if one of these currencies were to become predominant worldwide. Despite the formidable challenge this poses, it is quite encouraging to see that, under the umbrella of the BIS, the major advanced-economy central banks are committed to developing a coordinated digital payment architecture, in which these currencies are intended primarily for domestic use. Of course, the latter goal should be achieved without preventing CBDCs from being used for international payments, hence the importance of ensuring the interoperability of the various digital currencies – an interoperability which already exists today within the euro area, but not between the payment systems of the different monetary zones.

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5. See ECB (2020). «Report on a digital euro», October.
6. Fabio Panetta, a member of the Governing Council, stated last February that the project would take around four or five years to be ready.
7. Fabio Panetta, a member of the ECB, has suggested setting the limit at 3,000 euros. If all euro area citizens were to use this amount in full, we would be talking about a very high sum: 1 trillion euros, practically as much as Spain's GDP.