

The e-monetary policy of the new digital economy

Digital technologies permeate the debate on the future of the economy. Monetary policy and its main vehicle, money, are no exception. More and more products are sold over the internet and cash is used less and less. This new digital economy creates new demands on the financial sector and digital money emerges as a new means of payment that appeals to consumers. How does all this affect monetary policy? What can central banks do (and what are they doing) about it?

Private digital money, monetary policy and financial stability: constraints and risks

In simple terms, digital money is the «digital» representation of physical forms of fiat money (such as a 1-dollar bill or a 2-euro coin).¹ But its **extensive integration into our «digital lives»** (think of a Facebook or Instagram profile), **its low transaction costs and network effects** (companies that are considering launching digital money, such as Facebook, have a huge user base) **make it attractive** for consumers and businesses.²

However, **users of digital money issued by private issuers face four major sources of risk:**

- **Liquidity:** for example, if each unit of a cryptocurrency is backed by a set of assets denominated in euros, will the issuer have the capacity to sell these assets and convert the cryptocurrency into euros, for those users who wish to do so, even at times of high demand or financial stress?
- **Default:** if the private issuer fails, what happens to the cryptocurrencies held by the users?
- **Value:** let us imagine that the assets which back the cryptocurrency (for example, sovereign bonds denominated in euros) suddenly lose value. *De facto*, the issuer will have issued more digital money than it would owe (given the new value of the assets that back its supply). As a result, it could be forced to «devalue» the cryptocurrency (exchanging it for fewer euros than what it had initially established), which could lead to losses for its users.
- **Market power:** the nature of money leads to network effects (the more players there are using a currency, the more attractive it is as a means of payment), which can lead to a natural monopoly: one currency to «rule» all exchanges. Thus, in the absence of adequate regulation, the issuer could set entry barriers and **extract incomes from the users of its cryptocurrency.**

These individual risks for the user also lead to **other risks affecting society as a whole.** In particular, from the point of view of economic policies, these include:

- **Loss of control over monetary policy:** if a cryptocurrency issued by a private issuer prevails over the central bank's currency, it would erode the central bank's ability to influence the supply of money and interest rates that really affect consumers, savers and investors in the economy. Some examples:
 - **«e-dollarisation» of the economy:** this substitution would be similar to that suffered by some economies in which the US dollar, rather than the local currency, is the main means of exchange due to the population's lack of confidence in their institutions. In the same way that the financial conditions of these economies move to the sound of the US Federal Reserve, in a world of digital money the financial conditions would be influenced by the private issuer of cryptocurrencies.
 - **Procyclicality (a risk associated with stablecoins):** most stablecoins, such as Libra, would be backed by a selection of currencies and low-risk assets (such as US or German sovereign bonds). Thus, in an expansive phase of the economy, players in the economy would demand more stablecoins, resulting in an increase in purchases of the assets that back them. According to some authors,³ this would apply downward pressure on their interest rates, which in turn could provide feedback for the expansionary phase and hinder the implementation of the desired monetary policy.
- **Financial stability risks:**
 - **Source of systemic risk:** if a private cryptocurrency were to dominate a significant portion of transactions, a potential failure or weakness of the issuer would affect the entire international payments system.
 - **Disruption in the banking system:** digital money offers an alternative to bank deposits for households and companies to store their savings. Therefore, widespread use of digital money would oblige the traditional banking sector to compete for deposits and to seek alternative sources of funding (no doubt, less stable). This could increase the cost of credit and encourage greater risk taking.

What can central banks do?

Central banks will play a key role in defining the new macrofinancial environment: which digital money is adopted and the extent to which it affects the financial system as we know it.

In the past, central banks ended up monopolising the issuance of banknotes and, to date, have guaranteed a single and secure payments system that is accessible to the entire population. Therefore, a natural alternative to private cryptocurrencies is the central bank issuing its own digital currency:

- Broadly speaking, **a central bank digital currency (CBDC) could involve the central bank opening up current accounts directly to households and businesses:** for the consumer, this would be similar to the current system of bank deposits and transfers, with the difference that their current account would be held in the central bank.

1. In this article, when we talk about «digital money» we do not include deposits and bank accounts.

2. See T. Adrian (2019). «Stablecoins, central bank digital currencies, and cross-border payments: a new look at the international monetary system», speech at the IMF-Swiss National Bank Conference. Furthermore, in countries with fragile institutional systems, it is common for the population to have greater confidence in multinational companies supplying digital money than in their own institutions.

3. See M. Pettis (2019). «Facebook's Libra: Does the World Need Frictionless Money?». Carnegie Endowment for International Peace.

- While this might seem a natural step, **this option would require the central bank to play an abnormally active role**: attracting customers, checking their personal details and interacting with them, developing technology, etc. These are tasks in which a central bank lacks experience and which could also put their reputation at risk.

For this reason, some proposals for a **synthetic CBDC** have emerged:⁴

- The central bank would develop an infrastructure for the CBDC into which private issuers of digital money (which could include traditional financial institutions) would incorporate their payment methods:
 - By allowing access to multiple issuers, **this would ensure competition in the market**.
 - To ensure the security of the currency and maintain control over the monetary supply, **the central bank should require issuers to back 100% of their currency with reserves** in the central bank.⁵
 - This would **make the most of the competitive advantages** of both the private sector (e.g. customer management and innovation) and the central bank (supervision and regulation, reputation and trust).
- **A CBDC would offer a direct channel for the transmission of monetary policy**:
 - As an example, if the central bank saw fit, it could issue a digital currency to pay interest costs and adjust such payments as part of its monetary policy.
 - In addition, a CBDC that replaces cash entirely would allow the central bank to cut interest rates to more negative levels than what is feasible today.
- However, a CBDC would also entail risks at the macrofinancial level:
 - **Deposit flight**: as in the case of a private digital currency, the CBDC offers an alternative to bank deposits. In periods of stress, the CBDC could be perceived as being safer, because although it would not necessarily be safeguarded by something like a deposit guarantee fund, it would be backed by reserves deposited in the central bank. This could encourage the outflow of deposits from commercial banks towards issuers of CBDCs and, therefore, indirectly towards the central bank.⁶
 - **International coordination**: digitisation removes physical barriers, thereby making it easier for a user to choose the CBDC that suits them the best, regardless of jurisdiction. In other words, it creates greater competition between CBDCs and, therefore, **requires greater international coordination on monetary policy**.

Central bank initiatives

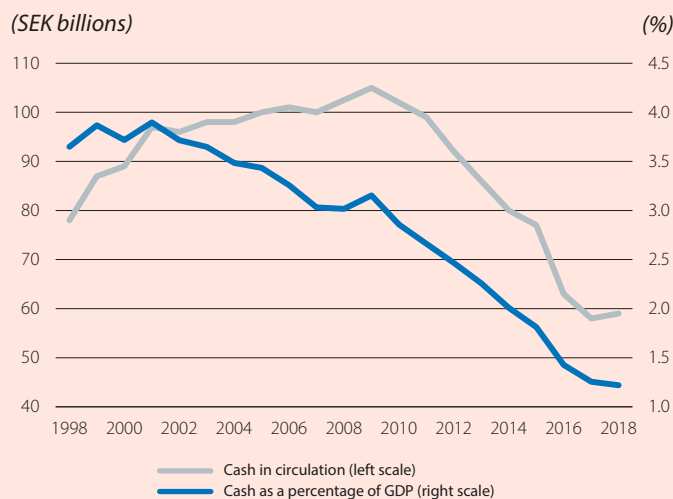
Faced with the current reduction in the use of physical currency and the emergence of private initiatives that could entail different risks, some central banks have already assessed the possibility of issuing digital money:⁷

- **Sweden**: the central bank of Sweden (Riksbank) was among the first to study the possibility of issuing its own digital currency, following the collapse in the use of cash (it is common to find businesses that do not accept it). It has made considerable progress in the **e-krona** project and has presented it to the Swedish parliament, which must decide on the need for the central bank to «mint» a CBDC. The Riksbank has not yet decided on its design (whether users could open an account in the central bank itself or a version closer to a synthetic CBDC).
- **Uruguay**: in 2017 the Central Bank of Uruguay launched its digital currency (**e-peso**) in a six-month pilot test which limited the number of e-pesos that could be issued. The e-peso had the characteristics of a synthetic CBDC, but only a private issuer could access the platform. For this reason, there was no competition between different issuers, with all the benefits in terms of innovation that this would generate. Nevertheless, the conclusions that the central bank drew from the project were relatively positive.⁸

As these examples illustrate, central banks have begun to explore the possibilities that digital technologies offer for money and, therefore, for monetary policy. The emergence of private proposals like Facebook's Libra highlights the importance for central banks to uphold their historic commitment to the proper functioning of the payments system.

Adrià Morron Salmeron and Ricard Murillo Gili

Sweden: cash in circulation



Source: CaixaBank Research, based on data from the Riksbank.

4. See T. Adrian (2019). «From Stablecoins to Central Bank Digital Currencies». IMF Blog.

5. With a reserve coefficient of 100%, these providers would not grant credit: they would be limited to processing payments.

6. In this scenario, the central bank could stabilise the system by injecting liquidity into commercial banks (injections that would be balanced by the increase in reserves that the central bank would receive due to deposit flight).

7. The ECB and the Fed have not submitted their own proposals, although their various officials recognise the potential of the technologies related to digital money and highlight the importance to monitoring their development.

8. M. Bergara and J. Ponce (2018). 7. Central Bank Digital Currency: The Uruguayan e-peso case, in «Do We Need Central Bank Digital Currency?» n° 82.