

A note on the digital banknote

Agnès Bénassy-Quéré, April 2026



The digital euro project is raising many questions, which is only to be expected given that this innovation will affect our daily lives. But what exactly is it, and how can we address these concerns?

What is the digital euro?

The term « digital euro » can be confusing. If I pay EUR 20 using my mobile phone, I am paying in euro, and the payment is a digital payment. If, however, I pay with a EUR 20 banknote, I am still paying in euro, but this time it is a cash payment.

In reality, the two payments differ not only in terms of whether they are digital or cash. If I pay with my phone, I withdraw EUR 20 from my bank account. This is what is known as “commercial money”, which is a kind of debt owed by the bank to me. If I pay with a banknote, this money is not issued by my commercial bank, but by the central bank and is legal tender.

The two forms of payment are equivalent. In fact, I can convert EUR 20 of commercial money into EUR 20 of central bank money at any time (all I need to do is go to an ATM).

The digital euro project aims to offer central bank money not only in the form of banknotes, but also in digital form (see table below). The aim is to adapt to changing trends in retail payments, where cash payments are declining year on year in favour of bank cards and, to a lesser extent, bank transfers and payment apps.

Table: Classification of retail means of payment

	Paper	Digital
Commercial bank	Cheque	Cards, bank transfers, possibly via a mobile app
Central bank	Banknotes	Digital euro

Source: author.

The digital euro will be held in an electronic wallet, which can be integrated into banking apps. It will also be possible to make payments in digital euro with a card. Anyone will be able to top up their digital euro wallet from their bank account, either automatically (as and when needed) or on an ad hoc basis, just as when withdrawing cash from an ATM. Holdings of digital euro will be capped, for example at a few thousand euros for individuals (the exact limit has not yet been set), and any amount exceeding this limit will be automatically transferred back to the bank account. For retailers and tradespeople, the balance of the digital euro wallet will be transferred to their bank account, either upon receipt of a payment or every evening.

It will be possible to make payments in digital euro on e-commerce platforms, as well as at points of sale and between individuals. Below a certain limit yet to be determined, it will be possible to use the “offline” function, which ensures anonymity, just as with a cash payment. As is the case today, the bank will know that I have requested EUR 20 in central bank money, but it will not know what I have done with it.

People without a bank account will be able to open a digital euro wallet with the same limit and the same features. This provision will enable very low-income households to access this modern and free means of payment. The digital euro thus addresses a need for financial inclusion.

Having received the green light from the European Council in December 2025, the proposal is currently under debate in the European Parliament, with a vote scheduled for May 2026. If approved by Members of the European Parliament, an agreement will need to be reached between the Council and Parliament on a final version of the legislation, and the digital euro could thus find its way into our wallets from summer 2028.

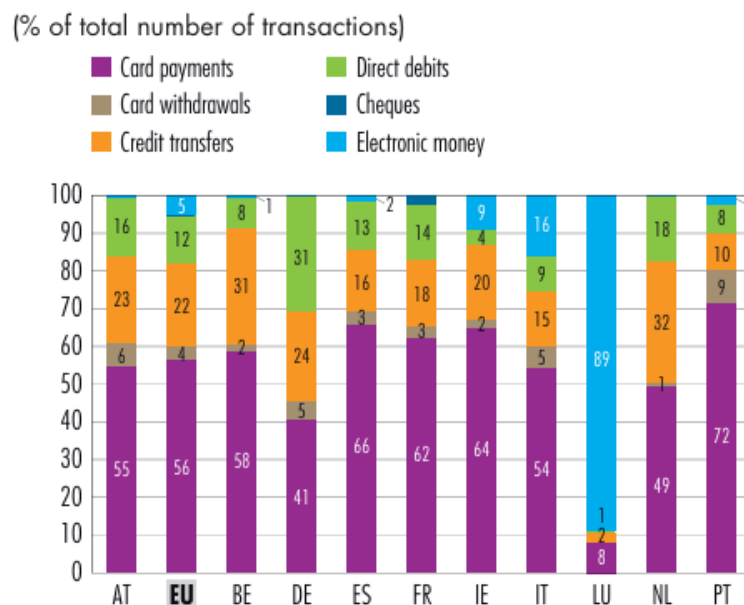
The project has been met with a great deal of enthusiasm, but also with concerns and even objections. Let’s examine them one by one.

A solution in search of a problem?

The most common criticism levelled at the digital euro is that it is “a solution in search of a problem”. What is the problem that the European Central Bank, which initiated the project, wishes to solve?

The principal means of payment in the euro area is the bank card, which is used in 56% of non-cash payments, i.e. excluding cash payments (but including cash withdrawals using bank cards). According to calculations by the [Banque de France](#) based on ECB statistics (see chart below), the market share of the bank card is as high as 62% in France and has been rising steadily since 2008, when it accounted for only around 35% of transactions in France.

Chart: Use of non-cash means of payment in the main European Union countries in 2024



Source: European Central Bank (statistics on payment services).
Note: AT, Austria; EU, European Union; BE, Belgium; DE, Germany; ES, Spain; FR, France; IE, Ireland; IT, Italy; LU, Luxembourg; NL, Netherlands; PT, Portugal.

Source: [In 2024, French citizens continued to adopt innovative payment methods](#)

However, the bank card market is largely dominated by two US companies: Visa and Mastercard. This has two consequences:

- A high degree of dependence on non-European players, which could reduce or even interrupt the service, [as happened in August 2025](#) to several judges at the International Court of Justice in The Hague, including one French judge.
- A duopoly that enables these companies to charge increasingly high fees at all four “corners” of a transaction: the payer, the payee and their respective banks. The pricing of cards and card payments is not public. According to a [study](#) carried out for the European

Commission, the fees charged to merchants on debit card payments in 2022 amounted to 0.44% of turnover (compared with 0.27% in 2018), with fees being higher for credit cards. To this must be added card acquisition costs as well as the costs borne by the banks.

National bank card schemes do exist in some countries (such as the *Groupement Cartes Bancaires* in France), but they are not interoperable (for example, a French card is not accepted in Germany, and vice versa). Furthermore, according to the [ECB \(February 2025\)](#), 13 of the 21 euro area countries do not have national cards and are therefore entirely dependent on the Visa-Mastercard duopoly.

Thus, the retail payments market in the euro area is dominated by non-European players. The only two truly pan-European means of payment are cash and bank transfers.

Since 2017, the euro area has had a highly efficient instant payment infrastructure, enabling bank transfers to be completed in a few seconds. Since January 2025, banks have been required to offer this service to their customers at the same rate as standard transfers, throughout the euro area. However, bank transfers account for only 22% of non-cash transactions, and just 18% in France in 2024 (chart). One reason for this is the limited development of commercial solutions for making retail payments via instant transfers.

A welcome step forward has been taken with the European Payment Initiative project, launched in 2020 by 16 banks in the euro area. In 2024, this consortium began rolling out the [Wero](#) solution for instant person-to-person payments, with each user identified by their phone number. This system is expected to be available for online payments by the end of 2026 and in-store payments by the end of 2027, as an alternative to bank cards. However, it is currently only available in five European countries (Germany, Belgium, France, Luxembourg, the Netherlands). The southern European countries (Spain, Italy, Portugal) have each developed an alternative system in parallel, such as Bizum in Spain, and have formed an alliance known as EuropA. A project to ensure interoperability between Wero and EuropA was recently announced, with a time horizon of 2–4 years, although it is not yet certain that a solution will be operational in the near future.

It is not an easy task to gain a foothold in a payments landscape dominated by long-established players benefiting from huge network effects. An attempt had already been made in 2007 to develop a European payment card network (the Monnet project). It was abandoned in 2013.

The digital euro is a unique opportunity to overcome these network effects and to structure a sovereign ecosystem that encourages private European solutions (such as Wero) alongside central bank money. Indeed, a decisive advantage of central bank money is its legal tender status: the digital euro will be rolled out across the entire euro area from the outset. The digital euro and Wero are expected to be highly complementary, with the two payment solutions being combined within the same digital wallet. In practice, I will be able to use Wero at retailers that accept this payment method, and the digital euro in other cases, particularly for small offline payments or when travelling to other European countries; all from the same digital wallet provided by my bank or a payment provider.

The complementarity of different payment methods must also be considered in terms of resilience. As with means of transport, having a variety of payment methods is useful in itself, as none of them is infallible. A devastating flood (Alpes-Maritimes, 2020) or a cyclone (Mayotte, 2024) can temporarily cut off an area's electricity supply, forcing it to fall back on cash payments. A cyberattack on a bank may necessitate the temporary use of payment methods other than bank cards, etc.

An overly costly solution?

The criticism that immediately follows concerns the cost of the digital euro. This criticism stems from [a study by PricewaterhouseCoopers \(PwC\)](#), commissioned by European banking associations, which estimated that the investment required for the entire European banking system to roll out the digital euro would amount to EUR 18 billion, spread over four years. The method involved estimating the cost per bank based on a sample of 19 banks, then multiplying this by the number of banks in the euro area, whilst applying an unspecified flat-rate reduction for “synergies” within banking groups.

[The ECB recalculated the figures](#), distinguishing in particular between synergies within banking groups (where IT systems are sometimes shared) and market synergies, as a single IT or payment service provider may serve several banking groups. The ECB arrived at a total cost of between EUR 4 and EUR 5.77 billion, still spread over four years, representing approximately 3% of the banks’ annual IT investment costs.

The digital euro aims to fit in as much as possible with existing technical standards. In practice, it will be incorporated into the apps already offered by banks and payment service providers on smartphones, and will co-badge with national bank cards, and most retailers will not need to change their payment terminals ([ECB, 2025](#)).

Lastly, one cannot talk about costs without mentioning the benefits. The distribution of the digital euro will be accompanied by a pricing structure currently being developed, which will enable banks to recover their costs and may even generate revenue. Above all, this investment will enable banks to maintain a direct link with their customers, at a time when the current trend is for younger customers to migrate towards alternative payment service providers, or even, one day, towards digital players (BigTechs) that are making a decisive move into the payments sector but are not banks.

An overly risky solution?

Another major criticism levelled by the banking sector at the digital euro concerns precisely the risk of bank deposits evaporating. Indeed, anyone will be able to transfer funds from their bank account to their digital euro wallet at the click of a button and at no cost. Is this not likely to destabilise banks which, as we know, finance the economy through deposits?

It should be noted that this criticism is incompatible with that of the “solution in search of a problem”: if the digital euro serves no purpose, then it will not be used and bank deposits have nothing to worry about. It is also incompatible with the criticism, sometimes heard, that the holding limits render the digital euro useless (as if everyone always had several thousand euros in banknotes in their wallet!).

[The ECB has carried out simulations](#) using different holding limits, ranging from EUR 500 to EUR 3,000, based on surveys among European households concerning their payment habits and their intentions regarding the use of the digital euro. The result is reassuring: the transfer of deposits to the digital euro would be more than offset by the expected increase in deposits resulting from the reduction in cash circulation. Even in a crisis scenario, the evaporation of deposits would remain limited in quantitative terms.

In March 2023, Silicon Valley Bank experienced the fastest bank run in history, even though there was (and still is) no central bank digital currency in the United States. Depositors will always have ways to withdraw their deposits rapidly other than by transferring the money to their digital euro wallets, the amount of which, it should be recalled, will be capped. What rules out the risk of a bank run is not the existence or otherwise of a digital euro, but banking regulation, the strict supervision

carried out by the supervisory authority, deposit insurance and, finally, banks' access to the lender of last resort, namely the central bank.

Finally, the digital euro may be seen as an opportunity for banks to retain their depositors by offering them a wide range of services, including a wallet featuring several sovereign payment solutions (such as the digital euro and Wero) and certain innovative services linked to them, such as conditional payment (a payment scheduled at the time of purchase, triggered upon delivery of the product, for example) .

The digital euro: Big Brother?

The last concern regarding the digital euro – and by no means the least – is privacy. Won't the digital euro enable the central bank, and thus indirectly the state, to monitor our every move?

Firstly, we must not forget the “offline” function, which will ensure the anonymity of small payments. But this requires trust in the technology. For those who do not trust it, cash will continue to circulate and remain legal tender. [The European Commission's proposed legislation](#) even strengthens the role of cash for retail payments.

As regards online payments (e-commerce or point-of-sale payments via a connected terminal), banks will continue to have access to the data, just as they do today for card payments. The central bank, however, will not have access to these detailed data.

Tech giants are very interested in payment data. When I transfer money from my bank account to a digital wallet such as PayPal or Apple Pay, I am transferring my data to these service providers, which will use it in their business strategies. This transfer is less neutral than it seems. If, tomorrow, I need a loan, my bank could use this data to check that I am managing my finances properly. It is therefore in my best interests to restrict access to my data by an institution likely to offer me credit or other banking services, rather than to a company whose business is to monetise data, for example for targeted advertising.

It is sometimes suggested that the digital euro could be a way of phasing out cash from the daily lives of Europeans. [Sweden](#) (which is not part of the euro area) once considered this scenario, before deciding to take a wait-and-see approach in order to fully draw lessons from its pilot project, which ended in 2023, and from international developments in this field. The ECB reaffirms the role of cash – an inclusive and resilient means of payment – and is even going a step further by launching a feasibility study into a new series of banknotes. The [design contest](#) for future euro banknotes is currently underway. As for the Banque de France, in 2023 it decided to invest in a [new printing works](#) in Vic-le-Comte – a project that is progressing well (see photo below). Would this investment have been decided upon if the outlook had been the phasing out of banknotes?

Photo: Construction site of the Banque de France's new printing works in Vic-le-Comte, 2026



Source: [Banque de France website](#)

A closely related idea is that the digital euro would, in theory, make it possible to impose negative interest rates, whereas the interest rate on cash is 0%. But since cash and the digital euro are interchangeable, who would still want to hold digital euro bearing negative interest rather than banknotes? It is the same argument that led banks to refrain from passing on the ECB's negative interest rates to depositors between 2014 and 2022.

A digital banknote+

What would people say about central banks if, faced with technological innovations and changing payment habits, they simply contented themselves with designing new banknotes? It is natural and desirable to move with the times, and the digital euro aims to do just that. It does not claim to replace private means of payment, which are complementary and have always coexisted with central bank money. It simply transposes the qualities of cash into the digital realm: security, reliability, simplicity, accessibility and, lastly, sovereignty.

In short, the digital euro will combine, for all Europeans, the best of banknotes with the best of digital technology. Like banknotes, it will have the advantage of being free of charge, universal – being accepted throughout the euro area – confidential and safe given its technological resilience and the strength of the central bank. And like digital technology, it will enable consumers to make online and offline payments (particularly between individuals but also at physical points of sale), whilst maintaining a direct link between citizens and their sovereign currency, shielded from any non-European interference. The matter will soon be decided democratically by the European Parliament.