



Delano Magazine : “Smooth integration of the digital euro into the financial ecosystem is essential to its success”

Interview of Denis Beau

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1. What are the primary benefits that you anticipate digital euro would bring to the European economy and financial system, specifically in terms of efficiency, security and transparency?

The investigation phase on a digital euro launched by the Eurosystem in 2021 is nearing its conclusions. This phase intended to specify the key objectives of a digital euro as well as its main design features. We expect that the digital euro could help the following benefits:

- First, a digital euro would contribute to **maintaining the role of central bank money (CeBM)** in the landscape of payments in the digital age. Over the past decade, we have witnessed a decline in the use of cash, the only form of CeBM available to the public, because of digitalisation and changes in payment habits (e.g. development of contactless payments and e-commerce). With the digital euro, the Eurosystem aims to offer a form of CeBM that could be used by the public for all types of payments supporting their freedom of choice of retail payment instruments, whether in-store or remote, as a complement to banknotes. In this sense, a digital euro would allow to **extend the most valued features of cash** (privacy, offline use, wide acceptance, free of charge for basic use) in a digital environment. In addition, a digital euro would help preserve the payment system in ensuring for the public that “a euro is a euro”, whether it is CeBM or commercial bank money, thanks to the ability to convert freely and at par CeBM in commercial bank money and vice-versa.
- Second, the digital euro would also be a building block to meet our common goal of strengthening Europe's **strategic autonomy** and **economic efficiency**. While we have made significant progress toward greater integration of payments in Europe with the deployment of SEPA, some segments of the European payment ecosystem (e.g. daily payments at the point of interaction) are still heavily dependent on foreign-based actors. With its likely legal tender status, the digital euro would facilitate standardisation and support the emergence of pan-European payment solutions developed by European private players, such as the European Payments Initiative (EPI), which has recently announced its gradual launch.

2. While CBDC offers convenience over physical cash, there is a possibility of rapid acceptance by businesses and people alike. How do you foresee this potential transition impacting the euro area's financial liquidity, and what measures are being considered to

manage this potential risk? Will cash be removed from circulation to match the CBDC issuances?

Smooth integration of the digital euro into the financial ecosystem and payments landscape is essential to its success. The digital euro will co-exist alongside existing forms of central bank money (cash) and commercial bank money (cards, instant payments, etc.).

The digital euro will be complementary to cash and not replace it. It will offer similar characteristics as cash and will be available in situation where cash cannot be used because of its physical nature (e.g. e-commerce, peer-to-peer remote payments). In the end, both the digital euro and cash have a common objective: **ensuring that central bank money is available for use in daily payments.**

The Eurosystem's strategy to ensuring that euro banknotes and coins remain available to citizens at all times testifies to this commitment. This commitment is exemplified by the Eurosystem announcement in 2021, of its plans to launch a new series of banknotes and the recent request to the public about the design of these future banknotes. This commitment is also exemplified by the recent legislative proposal from the Commission on the legal tender of euro cash, which aims to foster the universal acceptance of cash in all euro-area countries, as it is in France. Another example is Banque de France recent announcement that it will make significant investments in the next few years to upgrade its cash production facility and make it future-ready.

At the same time, the Eurosystem will also ensure that the digital euro does not crowd out commercial bank money. To this end, it will use the tools at its disposal to make sure that the issuance of the digital euro does not endanger financial stability. Among these tools will be the ability to fine-tune the amount of digital euro an end-user could own, also called holding limits.

The digital euro will be an additional option available to end-users, increasing **freedom of choice**. Ultimately, it will be up to end-users to decide on the pace of development and the take-up of the digital euro.

3. Maintaining the cybersecurity and resilience of CBDC systems is crucial. Could you explain the steps taken to ensure the robustness and protection of the CBDC infrastructure against potential cyber threats and attacks?

Ensuring cyber resilience of a potential digital euro system is a top priority for the Eurosystem. The digital euro architecture will be designed with security at the forefront, incorporating robust encryption, access controls and multi-factor authentication to prevent unauthorised access. We are also committed to optimising the resilience and availability of the system to ensure seamless and reliable operations.

As the Eurosystem **already operates critical payment systems**, we have valuable experience in managing large-scale financial systems, on which we will build for the digital euro. Our established strategy for securing financial transactions, based on the CPMI-IOSCO Cyber Guidance and its three pillars (FMI resilience, sector resilience and strategic dialogue), has been successfully implemented at both the Eurosystem and national levels over the period 2017-2019. This strategy will be adapted and enhanced to meet the specific needs of the digital euro platform, ensuring its resilience and availability in challenging conditions.

Our dedication to security extends beyond cybersecurity, as we also focus on developing state-of-the-art fraud prevention systems, an important component of a future digital euro platform. By employing a comprehensive approach, we aim to protect users and financial institutions from malicious intent and unauthorized access, enhancing trust in the digital euro.

When we move towards the launch of the digital euro, we are committed to conducting thorough risk assessments and stress tests. This process enables us to identify and address potential weaknesses, ensuring the CBDC system's resilience against cyber threats and attacks.

Finally, we continuously engage with industry experts, cybersecurity professionals, and relevant authorities to **anticipate evolving security threats and adjust practices and techniques accordingly**. For example, we at the Banque de France are actively exploring quantum-safe cryptographic algorithms to address potential future challenges posed by quantum computing. Collaborating with leading experts in this field, we aim to identify and integrate robust quantum-safe solutions, ensuring the long-term security of the services we offer.

4. Centralised control is a fundamental aspect of CBDC issuance. How do you plan to strike the right balance between centralised control and maintaining the stability of the financial system, considering the potential impact on monetary policy transmission and financial intermediaries?

The digital euro aims to **build on the existing public-private partnership** and on the current distribution of roles between central banks and financial intermediaries. As a result, the Eurosystem will take on the minimum and necessary roles that would be strictly required to fulfill its key objectives. These roles include (i) issuing the digital euro, (ii) settling transactions in digital euro and (iii) defining the rules for the distribution of the digital euro by financial intermediaries.

In parallel, Payment Service Providers (PSP) will be given a large number of responsibilities, such as (i) onboarding end-users, (ii) distribution of the digital euro, (iii) provision of payment instruments supporting the digital euro, (iv) execution of compliance checks, (v) provision of added-value services for their customers, etc. In short, the digital euro will not lead to PSP disintermediation. PSP will be in charge of distributing the digital euro to end-users, enabling them to enrich functionalities and offer innovative services to their clients. By doing so, the Eurosystem will preserve the central role of intermediaries in the existing two-tier financial system.

In addition, the Eurosystem has conducted substantial analysis to assess the impact that a digital euro could have on the transmission of monetary policy. The Eurosystem has clearly indicated that using the digital euro as a monetary policy tool is not a motivation for its issuance, hence we currently see no need to have a remunerated digital euro. On the other hand, the digital euro should not hinder the transmission of monetary policy. As a result, we are considering setting a holding limit for end users to limit the overall amount of digital euro in circulation. This would result in curbing the deposit outflow and preserving financial stability.

5. Traditional banking institutions may face disruption due to the introduction of CBDC. How do you envision the impact on these institutions, and what strategies or support mechanisms are being considered to help them navigate this transition effectively?

If wrongly designed, a digital euro could have a negative impact on PSPs, increasing the risk of deposit outflows, and loosening customer relationship. If built on distinct payment rails, the digital euro could also lead to overlap with existing payment infrastructures.

The Eurosystem is well aware of these risks and has made design decisions to limit the impact of the digital euro on financial intermediaries. This general orientation has been reflected in many ways:

- On funding, **holding limits** would apply to each digital euro owner and would help to limit the risk of excessive outflows from commercial bank money to CBDC. This design decision will therefore greatly mitigate liquidity risk for financial intermediaries, preserving their funding and business model.
- On customer relationship and as described above, **financial intermediaries will play a key role in the digital euro ecosystem**. In particular, PSPs will be in charge of distributing the digital euro to end-users, offer payment instruments supporting it and will have the possibility to offer added-value services on top of it. They will therefore retain the customer relationship, the Eurosystem having neither the expertise, nor the mandate to do so.
- On the investments made by PSP to build payments infrastructures, the Eurosystem is looking into how to **reuse existing standards and components** for the digital euro as much as possible. That will help PSPs leveraging investments made in their own payment ecosystems, in particular in back-end infrastructures and front-end software / hardware for the distribution of the digital euro.

6. A fully digital currency is anticipated to reduce transaction costs for companies and businesses. However, do you believe it would inadvertently have a negative impact on actual cash transactions / circulation?

The digital euro is meant to be a driver for economic efficiency. It would add to the existing digital payment solutions offers, complementing current payment solutions. The digital euro will **foster the development of pan-European payments solutions**, which could increase competition in the digital payment ecosystem and set up a virtuous circle, decreasing costs for both merchants and consumers.

Nevertheless, we do not expect the digital euro to compete with cash but to complement it, by being available in situations where cash cannot be used, e.g. online.

Besides, the Eurosystem remains strongly committed to ensuring availability of and access to cash. Its long-term goal is to ensure that central bank money is available to all and can be used in the retail payment landscape, be it in physical or digital form. This ambition is also shared by the European Commission, which released on 28 June 2023 a legislative package to promote the acceptance of cash and establish the digital euro.

Eventually, it will be up to citizens to decide and the digital euro will just be another way of paying, alongside cash and other payments means provided by market players.

7. Facilitating cross-border CBDC transactions both intra-EU and extra-EU brings its own challenges. Can you outline some of the potential hurdles, such as regulatory harmonisation, anti-money laundering measures and foreign exchange considerations, and how to overcome them?

Some legislative pieces such as the **Payment Service Directive** and the **Payment Account Directive** initiated the **integration of the retail payment landscape** largely before the launch of the digital euro investigation phase. Nevertheless, there is still a number of regulatory differences across jurisdictions that can hinder intra-EU cross-border payments.

The digital euro could thus be an opportunity to foster regulatory harmonisation between Euro area Member states, for instance through the standardisation of onboarding requirements but also on cross-border payments intra-EU, thanks to the legal tender status of the digital euro.

Improving cross-border payments with jurisdictions located outside of the euro area requires a more global and coordinated approach. The G20 has made improving cross-border payments' efficiency (through lower costs, better access and enhanced speed and transparency), a key objective since 2020 and has defined a roadmap with tangible targets to reach in 2027 to achieve this goal. Standard-setting bodies such as the CPMI, the BIS or the FSB are instrumental in the implementation of this roadmap and the Banque de France plays an active role in contributing to these these instances.

This roadmap identifies CBDC (both retail and wholesale) as a building block to enhance cross-border payments:

- On the retail side, the Eurosystem has identified several models that could be used to facilitate cross-currency payments, either by interlinking several CBDC systems or by creating a common settlement infrastructure bringing together several currencies. Also, the Eurosystem and the Commission, through its legislative proposal, consider granting access to the digital euro to non-residents of the euro area provided that a framework is put in place to regulate the usage of the digital euro with third countries.
- On the wholesale side, the Eurosystem is actively working with financial institutions on wholesale CBDC and how it could be used to facilitate cross-border interoperability. In this sense, the Banque de France recently published an updated version of its [report on wholesale CBDC](#) on 21 July 2023, with further experiments showcasing interoperability.

8. Consumer protection is crucial, particularly in the digital realm. What specific safeguards and measures will be implemented to protect consumers from fraud, scams and unauthorised transactions when using digital euro, given the irreversible nature of digital transactions?

Effective fraud detection and prevention is indeed a critical part of end-user protection in any payment method. For end-users to adopt and continue using the digital euro, they would need to feel it is safe and secure.

The Eurosystem will rely on two legs when it comes to providing secure payments with digital euro.

- The digital euro will be distributed by PSPs, which are entities complying with existing regulations such as PSD2. **PSPs will therefore provide a first level of end-user protection** (such as strong authentication) to ensure that any executed digital euro transaction has been properly authorised
- The Eurosystem is also exploring how a **dedicated service for fraud detection and prevention** could support intermediaries in their fraud management activities, for example through fraud monitoring and risk scoring of transactions, statistics and coordination of information
- On top of this fraud component, we are also looking at how a dedicated platform could **facilitate the dispute resolution** between PSPs for the purpose of better end-user protection.

9. In times of financial crisis or potential bank runs, how do you anticipate CBDC systems contributing to financial stability and the central bank's ability to effectively manage such situations, ensuring the confidence of individuals and businesses?

The use of Central bank money as the anchor of our monetary system underpins European citizens' **trust** in the **stability** and **resilience** of our payment system. A digital euro would help preserve this role of central bank money, by adapting its form provided to the general public to the digital age the payment landscape has entered into.

However, if not designed properly, a retail CBDC could increase the likelihood of bank runs where end users would convert their bank deposits into a retail CBDC, thus creating liquidity risks for banks. The Eurosystem is well aware of this risk and it has expressed its intention to **incorporate holding limits** in the design of a digital euro to prevent bank runs. We have considered that this would be the most efficient tool to preserve the financial stability compared to alternative instruments such two-tiered remuneration. The calibration of these holding limits will be done closer to the issuance of a potential digital euro, taking into account financial stability risks while also considering its impact on the usability of the digital euro.

10. In a recent speech, Fabio Panetta, ECB Executive Board member, [mentioned](#) the likely launch of the digital euro in three or four years' time, while you [expect](#) a potential and gradual launch from 2027 or 2028 onwards. Is there a reason behind the gap of an year about the timeline?

There is no gap as those dates are at this stage indicative. The Governing Council will decide in the autumn whether to move to a preparation phase for the digital euro project. It will be able to present at that time a more precise timeline for a possible release of the digital euro.

During the **preparation phase**, the Eurosystem would develop and test the possible technical solutions and business arrangements that could be used to provide a digital euro. In parallel, the co-legislators will decide on the legal framework for the use of the digital euro, a process that could last for a couple of years. The Governing Council will make a decision about a possible issuance of the digital euro only after this legislative act has been adopted.

If the Eurosystem decides to issue a digital euro, its **deployment would follow a staggered approach, with a gradual roll-out of use cases in two product releases.**

A gradual rollout is normal practice in the market when introducing new payment instruments, especially those that are highly complex. In the case of a digital euro, complexity stems from the need for a pan-European reach, which can be difficult to achieve for specific use cases, such as for point-of-sale payments given the need to have to have an updated acceptance infrastructure (e.g. point-of-sale terminals). Implementing a phased approach to rolling out various use cases of a digital euro across the euro area would mitigate execution risks and minimise delays.

11. Last but not least, is 'Cash+' the new name for the digital euro, as you described it as e-euro digital banknote*?

The retail CBDC developed by the Eurosystem is called the digital euro. The term "cash+" is only intended as a **metaphor** highlighting that the digital euro will be a form of augmented cash, but not a new name for the digital euro. It will have the same features as existing cash (i.e. privacy, offline use, free of charge for basic use, legal tender) but will also offer additional features compared to banknotes. These additional features would include the ability to pay in use cases where cash is not available (e-commerce, remote P2P) and the possibility to add innovative services on top of the digital euro (e.g. conditional payments).