

DIGITAL EURO: ONE COST MAY HIDE ANOTHER

Following PwC in June, the ECB presented its own assessment of the costs of a digital euro for banks in the Eurozone. Thanks to extensive cost synergies, their initial investment over the first four years, estimated at EUR 18 billion by PwC, would, according to the ECB, be within a more modest range (between EUR 4 and 5.77 billion). But this amount, which has attracted a lot of attention, is not the only issue at stake, as the recurring cost of replenishing banks' reserves with the Eurosystem could, in the long term, weigh more heavily on financing conditions.

On 29 October, the Governing Council of the European Central Bank (ECB) began a new step in preparation for the digital euro and published an indicative timetable for its launch. Subject to the adoption of a legislative framework by the European Parliament and the Council in 2026, a pilot exercise could start in 2027 and the ECB could issue its digital currency as early as 2029¹.

This project is raising concerns among banks in the Eurozone, not because of its perfectly laudable objective (preserving European sovereignty), but because of the proposed terms (see, for example, the open letter published last week by the EPI²).

About two weeks earlier, the ECB had presented its estimate of the investment costs associated with the digital euro³ for the banking industry, based on the study published in June 2025 by PwC⁴. Conducted at the request of European credit sector associations⁵, the PwC cost study suggests that an investment effort of EUR 18 billion for Eurozone banks is needed. These costs cover the necessary initial investments (system development, infrastructure adaptation and integration with existing services). However, recurring operating costs (maintenance, updates and technical support) are not included in the scope of the analysis.

Based mainly on additional synergies (accounting for 95% of the cost), the ECB has lowered the figure from EUR 18 billion to between EUR 4 billion and EUR 5.77 billion, an amount that the ECB considers modest, as it accounts for only 3% of the banks' annual IT costs⁶. However, the picture is quite different when the EUR 18 billion estimated by PwC is compared to the EUR 220 billion in aggregate net income of Eurozone banks in 2024⁷.

However, this battle of figures obscures the essential point: the cost of the digital euro to the banking sector will not lie so much in the initial investments (which are already significant), but instead in the additional refinancing from the Eurosystem needed to compensate for the loss of reserves resulting from the conversion of customer deposits into digital euros. We estimate this cost to be close to EUR 8 billion per year, based on average assumptions.

WHAT 'INVESTMENT COSTS' ARE AND WHAT THEY ARE NOT

PwC's analysis is based on a sample of 19 banks and banking groups of different sizes and business portfolios, and is then extrapolated to the Eurozone banking system. The cost estimate depends largely on the size of the banks, but also on other characteristics, such as whether they have a centralised or decentralised structure. The average compliance cost is estimated at EUR 110 million per bank, or EUR 18 billion for the entire Eurozone banking system. The expenses included relate to the circulation and distribution of the digital euro, as well as the implementation of technologies for processing payments, including ATMs, point-of-sale (POS) terminals and e-commerce infrastructure. According to PwC, the cost estimate is based on the best possible understanding of the potential characteristics of the digital euro, as set out in the draft digital euro scheme rulebook currently being developed (version V0.8a).

However, costs related to offline functionality, multiple-account management and merchant acquiring⁸ (costs related to the payment process itself) are excluded, as there was insufficient detail available at the time of the study. Therefore, PwC emphasises that its estimate is an initial approximation of the minimum expected costs. Finally, although the amount of synergies is not explicitly mentioned, PwC indicates that lower synergies could increase costs by 20% and that the integration of offline features could increase them by 40%⁹. The overall cost would then rise from EUR 18 billion to around EUR 30 billion.

THE ECB'S ADJUSTMENTS

The ECB takes PwC's cost study as its starting point and supplements it with strong assumptions about synergies:

- Synergies linked to institutional protection schemes (IPS): these institutional protection schemes are based on contractual or legal mechanisms that guarantee the liquidity and solvency of member institutions in order to protect them from bankruptcy¹⁰. The ECB estimates that synergies between its members (1,420 banks, accounting for 70% of the scope) would reduce their costs by 95%, an exceptionally high rate. However, one question remains:

1 ECB (2025), Eurosystem opens next stage of digital euro launch, 30 October.

2 "Wero promoters call for review of digital euro project", Le Figaro/AFP, 3 November 2025.

3 ECB (2025), A view on recent assessments of digital euro investment costs for the euro area banking sector, 10 October.

4 PwC (2025), Digital Euro Cost Study: From concept to implementation: evaluating some economic implications of the digital euro for European retail banks, June.

5 These include the European Banking Federation (EBF), the European Savings and Retail Banking Group (ESBG) and the European Association of Cooperative Banks (EACB).

6 ECB (2025), see statements by F. Panetta in Monetary Policy Statement, Press Conference, 30 October.

7 Source: ECB, Consolidated Banking Data.

8 'Merchant acquisition' refers to all services provided by a bank or payment service provider (known as an acquirer) that enable merchants to accept electronic payments, particularly by bank card or contactless smartphone.

9 See PwC (2025), note 4, page 6.

10 Article 113(7) of Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 (CRR). For more details, see Choulet C. (2017), Are institutional protection schemes groups?, Conjoncture BNP PARIBAS, January.



PwC already included synergies in its estimate without specifying the amount, so how can the ECB be sure that the newly introduced synergies will not duplicate those already included? The risk here is that costs may be underestimated.

- **Market synergies:** these reflect the potential cost savings that would stem from shared solutions or the use of common service providers for independent banks within the same country. For example, the main (technical) providers of IT and payment services are likely to offer digital-euro-related services to several banks. In some countries, banks also jointly own technical service providers that can offer these services centrally (the example given being Bank-Verlag, owned by the Association of German private banks). The ECB estimates these market synergies – in addition to those related to IPS – at 30% of the costs.
- **Reuse of existing infrastructure:** bank cards, point-of-sale terminals, ATMs equipped with QR codes and calculation of commissions covered by the Eurosystem. These adjustments would reduce the bill by an additional 16%.

In total, the ECB's assumptions reduce the investment required by the banking system over the first four years from EUR 18 billion to between EUR 4 billion and EUR 5.77 billion.

However, this figure does not include the opportunity cost for banks of allocating human and financial resources to a dedicated infrastructure, without any synergy with the development of financial services on blockchain, which is expected by some of the European public, nevertheless.

THE COST OF REPLENISHING RESERVES

Beyond the initial investment effort, the banking system will have to bear the recurring costs of replenishing reserves with the Central Bank that have disappeared following the conversion of part of customer deposits into digital euros.

Although commercial banks currently have abundant reserves with the Eurosystem, these are set to decline as a result of the ongoing normalisation of the Eurosystem's balance sheet (reduction in securities portfolio linked to QE) and the conversion of bank deposits into digital euros. However, these reserves will need to be largely replenished in order to enable banks to keep their liquidity coverage ratio (LCR) at a sufficient level, including a safety margin above the regulatory requirement. Recent internal work by the ECB puts this level at around 130%¹¹.

It is still difficult to put a definitive figure on the cost of replenishing reserves without knowing the final level of excess reserves and the Eurosystem's balance sheet after QT, the level of the LCR in steady state and the propensity of banks to substitute sovereign securities for excess reserves. The most recent document published by the ECB¹² suggests a conversion of bank deposits into digital euros of more than EUR 150 billion (approximately EUR 400 per individual) in the 'business as usual' baseline scenario, with an individual holding limit set at EUR 3,000.

Assuming that banks are forced to replenish an identical amount through refinancing operations, and assuming a refinancing rate close to the neutral rate, on average over the entire monetary policy cycle (2%), the recurring annual cost could amount to between EUR 3 billion and EUR 4 billion¹³. This additional cost would inevitably be passed on to customers sooner or later. As an order of magnitude, this is equivalent to an increase of nearly 2 to 3 basis points on the average rate applied to all outstanding bank loans to households and non-financial corporations in the euro area. Furthermore, the impact could be more pronounced in the early years, as the impact would be concentrated on the rates of new loans¹⁴.

Ultimately, the true cost of the digital euro will depend on the scale of bank-deposit conversions, which will in turn be determined by the established holding limit. This threshold will need to be carefully calibrated within the European legislative framework in order to enable the digital euro project to see the light of day while preserving the financing of the euro-area economy.

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¹¹ ECB (2025), 'Toward a new Eurosystem balance sheet', speech by Isabel Schnabel, Member of the Executive Board of the ECB, at the ECB Conference on Money Market 2025 on 6 November 2025.

¹² ECB (2025), Technical data on the financial stability impact of the digital euro, October.

¹³ This estimate takes into account the need to swap part of these resources at a fixed rate, assuming an average spread of around 100 bp between the 10-year swap rate and the hedged rate.

¹⁴ The contractual terms and conditions applicable to existing outstanding loans cannot be modified, including for variable-rate loans that depend on a market reference rate plus a fixed premium.

