

AGE Platform Europe input on questions raised for 1st June sectoral meeting

The digital euro will need to demonstrate it fills specific existing gaps in the current digital payment ecosystem because it will be:

- The only CBDC for the whole euro area;
- Its hardware and software, including the various possible devices used by the bearer will be designed to be inclusive (as mandated by the European Accessibility Act) and accessible to all, including to citizens with limited digital skills, the unbanked (34 million citizens in the EU).
- It will work also for offline payments and will serve as backup for other digital retail payments means.
- Designed to fully protect the privacy of the bearer from external parties/intermediaries.
- A peer-to-peer validated retail CBDC with the same limits as cash payments.
- Designed to allow the bearer to choose whether to connect their digital euro account to a private bank account or to a personal account hosted by a national bank.
- Safe: the digital euros will keep their face value, like cash, both in national and cross border transactions.
- The digital option to fulfil the euro legal tender for payments to and by public authorities.

BEUC's comments on the ECB presentation on 'digicash'

ERPB consultation 04.05.2022

This is a contribution to the ad-hoc consultation of the ERPB on the digital euro project.

[Comment on the presentation: Digital euro, use case analysis.](#)

BEUC fully supports the policy objective presented in the second presentation. It is necessary to maintain public access to and the full usability of central bank money at the time of developing electronic payments. Cash is less and less used as a means of payment which is why it is necessary to have a digital version of cash. In addition, if there is no 'digital cash' there is a risk that we will see the development of non-European solutions, CBDC or stablecoins (the 'sovereignty issue'). The priorities should be firstly payment in shops ('digital cash'), online payments and person-to-person payments. The digital euro will be for the consumer the only digital public money.

The introduction of the digital euro must also be seen in conjunction with the introduction of instant payments. There is a need to develop competition in payment means. Instant payments share with cash and the digital euro the characteristic that the beneficiary receives the funds instantly. In this situation, some consumers will prefer electronic instant payments to have a record of their transactions on their bank statements. Others, more sensitive to privacy, will prefer the digital euro.

BEUC's German member vzbv has conducted a [market research](#) on the consumer perspective about future payment methods. One of the main conclusions is that the digital euro is needed to address the needs of consumers for payment solutions.

[Comments on the presentation foundational design options for a digital euro.](#)

Question 1 What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?

As indicated in the [ECB glossary](#) the previous wording "bearer instrument" has been given up to use "peer-to-peer validated retail CBDC" and is defined as a payment solution in which payments require validation by a third party. "Payment account-based instrument" is now denominated "third-party validated instrument".

For BEUC, the digital euro should be a peer-to-peer instrument (bearer instrument) as physical cash and not a third-party validated (account-based) instrument. Our preferred choice is option 1.

The bearer instrument (peer-to-peer) is our preferred choice. In a first step, the consumer will transfer an amount in scriptural money to the digital euro account managed by an agreed intermediary. Secondly, the consumer loads their digital euros onto an instrument (mobile, computer, card, etc.). In a third step, the payment is the transfer of these digital euros from the payer's instrument to the payee's instrument. In a fourth step, the consumer can transfer the received euro digital to the account. Fifth step, the digital euros are reconverted in scriptural private money. No transfer between digital euro accounts should be possible. The amount of digital euros per account should be limited to avoid digital money hoarding.

Question 2. What are your views on privacy options for digital euro payments? How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?

The digital euro should have the same characteristics as cash: cheap and easy to use, secure, risk-free, efficient and more importantly anonymous.

The digital euro must be set up in a way that ensures that private actors such as payment providers are incapable of processing personal data. The core feature of cash transactions, which is anonymity, should be transferred to the digital euro. Privacy by design is an issue where the central bank should take a stand for anonymous payments

The cashless society is for the time being a traceable society. In a cashless society based on private money, all payment transactions are electronic and are therefore traceable. Consumers who want to protect their privacy must be able to make cash payments so that their transactions are not listed on their payment account statement. Any person or company with access to the bank statement of the consumer can learn a lot of information about their financial and personal life by analysing their payment transactions, for example about the consumer's political and religious affiliation, sexual orientation, health conditions, personal relationships etc. Privacy in the field of payments is a major issue for consumers and thus a requisite for a digital euro as an alternative to cash.

Slide 12 indicates "Focus group research on new digital payment methods & digital euro showed more nuanced views around privacy in payments". The focus group research is in fact the [kantar study](#). This study contains some interesting elements but is methodologically wrong regarding the privacy aspects. Most of the consumers surveyed had never heard of the digital euro. Moreover, as stated in the study, in order not to "scare" them, they were not told about the digital euro directly but instead referred to a wallet. In these conditions, it is quite logical that the privacy issue does not appear as the first concern. On the other hand, the almost 9,000 consumers who responded to the ECB's questionnaire at the end of 2020 rated privacy as the most important issue by 90%. These consumers took the initiative to answer this survey. There is a difference in nature between this approach and asking random consumers who have never thought about the subject. Therefore, it is quite a stretch for the ECB to conclude that ordinary consumers took a more nuanced view concerning privacy.

It is indicated in one of the slides that "Full anonymity of users is not a desirable feature –it would otherwise be impossible to control amount in circulation and avoid money laundering". We disagree with this statement. Regarding the amount in circulation, the calculation can be done of the amount issued by the intermediaries. The rule for anti-money laundering should be the same as for cash (the level is under discussion between Parliament and Council for the AML Directive). A recent [study](#) by the Dutch Central Bank also shows consumers' extreme sensitivity regarding for the privacy.

Question 3: How do you assess the role of intermediaries in the processing of users' transaction data?

As indicated in our previous [position paper](#) BEUC fully understand that the ECB cannot open an account for each EU consumer. In this case, why not consider the creation of establishments dedicated to this activity which would be more or less subsidiaries of national central banks. This would avoid the conflicts of interest inherent in the simultaneous management of private and public means of payment by banks. The ECB should set up a licensing system: the ECB creates the digital euro, licensed intermediaries acting on behalf of the ECB provide access to the digital euro to consumers. In this solution, the ECB would strictly limit activities of intermediaries to ensure cash-like qualities of a digital euro.

Question 4 What are your views on tools to avoid excessive use of digital euro as a form of investment? How do you assess the impact of remuneration and holding limits on the usability of a digital euro?

Consumer deposits with a central bank would obviously be of a different nature. For consumers, it is an equivalent instrument to cash. The objective is to be able to make payments and conserve cash. It is not an investment service. Under these conditions, it would be logical to provide for a maximum possible deposit amount on a digital account. Another possibility is to set up negative interest once the amount of that account is above this limit.



Digital euro: Use cases and foundational design options

EACB feedback to ECB

following the 1st ERPB technical session on digital euro

25/05/2022

About the EACB:

The **European Association of Co-operative Banks** ([EACB](https://www.eacb.coop)) is the voice of the co-operative banks in Europe. It represents, promotes and defends the common interests of its 27 member institutions and of co-operative banks in general. Co-operative banks form decentralised networks which are subject to banking as well as co-operative legislation. Democracy, transparency and proximity are the three key characteristics of the co-operative banks' business model. With 2,700 locally operating banks and 52,000 outlets co-operative banks are widely represented throughout the enlarged European Union, playing a major role in the financial and economic system. They have a long tradition in serving 214 million customers, mainly consumers, retailers and communities. The co-operative banks in Europe represent 85 million members and 705,000 employees and have a total average market share of about 20%.

For further details, please visit www.eacb.coop

The voice of 2.700 local and retail banks, 85 million members, 214 million customers in EU

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1. Introductory comments

- The EACB together with the other ECSAs request for separate meeting with the ECB on more prudential considerations regarding digital euro (liquidity risk, balance sheet adjustments, etc.).
- More in general, before developing our feedback on the specific questions that the ECB asked, the EACB would like to formulate the observation that:
 - The different policy goals identified by the ECB need different design features for a digital euro
 - The different policy goals have different market segments as main driver (retail versus wholesale in relation to e.g. cash replacement versus international role of the euro)
 - The different policy goals can be served by different kinds of digital money (central bank versus commercial)

From EACB point of view it would be important, in addition to discussing the specifics of potential retail use cases and how to design them, that regulators and industry form a joint holistic view of what kinds of digital money Europe needs to achieve different policy goals, how urgent they are and who is best placed (central bank or commercial banks) to best fulfill the objectives. We see this as essential to ensure an efficient use of limited resources and avoid unintended negative side effects.

2. Use case prioritisation

ECB questions

1. *What are your expectations regarding the future evolution of the different use cases (in terms of growing transaction volume and value)? and specifically:*
 - *What are the markets' views regarding:*
 - *The substitution of cash by digital payments in the physical environment (both POS and P2P)?*
 - *What private sector initiatives are currently taking regarding (i) programmable; (ii) machine-triggered; (iii) IoT related; (iv) micro-payments? What are the impediments (legal, technical, lack of demand, etc.) and how do you see these use cases evolving? What could be the arguments to have the digital euro playing a pioneering role (if any) in these? Please distinguish (i)-(iv) as relevant.*
 - *The future evolution of business-to-business and business-to-consumer transactions (in terms of growing transaction volume and value)?*
 - *What differences in rate of adoption of digital payments – over all use cases – are being observed across the different countries in the euro area*
2. *Considering the Eurosystem's preference to distribute a digital euro via supervised intermediaries, what are the market's views on how addressing the prioritised use cases will influence the strategic autonomy?*
3. *Do market participants identify other emerging market segments or use cases not covered currently in the strategic prioritisation matrix?*
4. *Do you wish to share other comments and/or insights related to the presented analysis?*



EACB comments

- The digital euro should be added to the various current payment instruments and cover only a certain number of use cases.
- We would agree with the following priority use cases, which would be in line with the ECB goal to create “an electronic form of euro banknotes” and are important for the strategic autonomy:
 - Person-to-Person payments
 - Physical store payments
 - E-commerce payments
 - Consumer-to-Government payments (limited to small amounts only)
- Further specific use cases could be piloted to test market adoption, e.g. lunch vouchers.
- Other use cases should not be considered by the ECB (machine initiated, business initiated, government payments). The private sector is better placed to cater for those use cases. For example, Central European industry is moving fast with the usage of DLT/Blockchain based solutions and the financial industry offers payment solutions adapted to the industry needs.
- Differences in rate of adoption of digital payments across Europe:
 - Although cash payments are declining, we do not expect the digital euro to fully replace cash
 - Physical store: the northern European countries are overall more digital than many other parts of Europe
 - E-commerce payments are digital everywhere, but available payment options vary across countries, e.g. in Germany the SEPA debit transfer is used, alongside international credit cards, SEPA credit transfer (within TPP Schemes) and PayPal; other countries such as Spain and the Netherlands had been able to acquire bank or TPP-driven solutions coming from their countries.
- EU monetary sovereignty can be strengthened by a combination of a wholesale digital euro, retail CBDC, tokenized commercial bank money. The international role of the euro would rather be strengthened by a wholesale digital euro that could support financial markets. In this context, we call on the ECB to start working on a wholesale digital euro.

3. Foundational design options

ECB questions:

- *What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?*
- *What are your views on privacy options for digital euro payments?*
 - *How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?*
 - *How do you assess the role of intermediaries in the processing of users' transaction data?*



- *What are your views on tools to avoid excessive use of digital euro as a form of investment?*
 - *How do you assess the impact of remuneration and holding limits on the usability of a digital euro?*

EACB comments

- The ECB presented the following foundational design options for a digital euro:
 - Option 1: with peer-to-peer validation of offline transaction
 - Option 2: available online and validated by a third-party
 - Option 3: with peer-to-peer validation of online payments
- The choice of the design options should take into account their cost for stakeholders, but also their ease of use for users:
 - EACB holds the view that option 1 (peer-to-peer validation of offline transaction) is the best one to limit the risk that a digital euro can create to financial stability, impact on bank balance sheets and competition with commercial bank solutions. It also is the best option to fulfil the cash replacement policy objective. EACB members do recognise however that option 1 does not cater for the policy objective that aims to provide an alternative for unregulated payment solutions such as stable coins. Option 1 may also not add much value in countries which already have a low cash usage and for which cash replacement is not a high priority.
 - Option 2 (online and validated by a third-party) offers more possibilities to develop attractive customer solutions but it also creates more risks towards financial stability, to the bank balance sheets and competition with commercial bank solutions. A combination of option 1 and option 2 overcome some of the limits of option 1. The risks of option 2 would still have to be addressed by the ECB and EU policymakers.
- Balance between privacy and AML/CFT policy:
 - ECB's baseline scenario (Transparent to intermediary) is acceptable: KYC during onboarding; transaction data and users' profiling data transparent to intermediary for AML/CFT purposes.
 - We would support greater privacy (P2P pseudonymity, intermediary-to-intermediary pseudonymity) for small transactions, up to a certain threshold.
- Digital euro should be only used as a payment instrument, not as a store of value or investment:
 - Low and strict holding limits should be set by law. This would be essential to avoid creating financial instability and simplify the use of the digital euro (the higher the holding limit, the greater the need for control and traceability).
 - No remuneration on holdings (similar to cash).



Digital euro

Tools to avoid excessive use as a form of investment

EACB feedback to ECB

12/07/2022

About the EACB:

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1. Introductory comments

The EACB welcomes the opportunity to provide input to the ECB on tools to avoid the excessive use of a digital euro as a form of investment. Before commenting on the options presented by the ECB at the bilateral meeting with the ECSAs on 3 June 2022, we would like to reiterate our general position on a retail digital euro.

The overall view of the EACB is that, while there are valid policy concerns to reflect on a digital euro, the added value of a retail digital euro from a pure consumer perspective would be limited, although the potential added value may vary across EU countries. Today's commercial banks' payment and account offer fulfils almost all needs already. For a retail digital euro to add value, it would have to be developed as a fully-fledged payment solution, this would, however, mean it would be an instrument that enters into competition with solutions of the private sector, lead to disintermediation of banks, a significant drop in commission income from offering payment services, and reduce the maturity transformation capacity of retail banks.

This does not mean there is no room for a central bank digital currency. There could be but not necessarily in the retail domain. In this regard, we welcome the Eurosystem consultation on the use of new technologies in wholesale payments and securities settlement (wholesale CBDC).

However, should a retail digital euro be launched, necessary safeguards need to be put in place to avoid the negative impacts on macro- and micro financial stability, deposits and funding costs of banks, and competition in payments market.

Besides that, a digital euro should be introduced only if there is a strong business case. All payment instruments have associated costs (for infrastructure, logistics, support, AML/CFT measures, etc.). Payments can be free of charge for users, but always come with costs which have to be covered partially by the ECB for the back-end infrastructure and require sustainable business cases at least for the payment acceptance side. The business model for a digital euro should be market driven, transparent and competitive.

2. Comments on the options for tools to avoid excessive use of a digital euro as a form of investment

The ECB considers that *"a digital euro, if not properly designed, could have an effect on financial stability and monetary policy transmission"* and that *"any undesirable consequences that may result from the issuance of digital euro are best mitigated by design, pre-empting excessive uptake by means of quantity-and remuneration-based tools."*



Overall, the EACB concurs with the ECB's statement above. A digital euro, if not properly designed, would lead depositors to transform their commercial bank deposits into digital euro holdings, which would significantly increase private banks' funding costs. In particular, this would jeopardize the funding base of cooperative banks, as many cooperative banks are predominantly funded by deposits and are not active on capital markets. In the worst case, institutions could face challenges to fulfil their minimum liquidity requirements for both the LCR (Liquidity Coverage ratio) and the NSFR (Net Stable Funding Ratio).

Moreover, our firm view is that, if a digital euro is launched, it should be only used as a payment instrument, not as a store of value or investment. Thus, the design of the digital euro should not just be aimed at avoiding "excessive" use but should avoid the use of a digital euro as an investment instrument full stop.

The ECB assesses the following design options aimed at preventing the use of a digital euro as a form of investment:

- Quantity-based tools: limits on individual holdings (with optional waterfall), limits on convertibility (i.e. the amount of commercial bank money that a user can convert into digital euro over a predefined time interval).
- Price-based tools: (tiered) remuneration of digital euro holdings.
- Combination of quantity-based and price-based tools.

Quantity-based tools

Limits on individual holdings:

- In order to ensure that the digital euro is used as a payment instrument only (and to avoid its use as a form of investment) it is highly important to foresee very low limits for digital euro holdings for individual users set by law, which should not be easy to change by a political decision e.g. in times of a crisis. In case of unlimited access to digital euro holdings, there would be a dangerous systemic risk of uncontrollable shifts from commercial bank deposits to digital euro holdings in times of stress.
- There should be one single holding limit: we do not support the idea of having different limit configurations for different user types (individuals, businesses, associations, etc). This would make the design of a digital euro too complicated. Only an intraday holding limit for registered merchants with cash registers could be considered with at least daily transfer to the commercial bank money account.
- Related to the holding limits, the ECB has pointed to the risk that one holder could open multiple digital euro accounts given the high level of privacy of digital euro. A potential solution to this issue could be integration with the upcoming EU Digital Identity Wallet (EUDIW). A person/holder should not be allowed to have more than one digital euro account.



- High level of privacy could be achieved in line with AML requirements with a low hard holding and transaction limit. For higher amount payments there is no need for a digital euro due to existing market-driven solutions that fulfill all user needs.
- A solution should be found to control convertibility limits (e.g. via binding/integration with the upcoming EUDIW). It would be difficult to control if users were allowed to have more than one digital euro account/wallet, and if each Member State/financial institution creates at least one different wallet, decoupled from any other European solution (e.g. EUDIW).
- External metric to determine the payment needs and related limits (e.g. holding limit for businesses of x% of their annual revenue): We do not support this metric as it would lead to difficult discussions about the revenues. What to do with businesses with accounts at multiple banks in multiple countries? Which annual revenue, last year/last public?
- What about Non-Euro / Non-SEPA businesses (e.g. Amazon, Alibaba), can they also receive digital euro? If yes, how to enforce/control the holding limits there? If no, what are the mechanisms to avoid such transfers? Would those businesses not get a digital euro wallet or get blocked?

Waterfall mechanism:

- Given that with a fixed holding limit amounts above that limit could no longer be paid/received, technical solutions would have to be designed so that the store of value function is limited, but the possibility to transfer the balance above the holding limit is still not limited at the same time.
- We therefore view positively a “waterfall” mechanism to avoid payment friction by transferring excesses on a digital euro account to commercial bank account. Combining low limits of digital euro holdings with a waterfall mechanism would allow citizens to use the digital euro in a user-friendly way that effectively limit disintermediation risk in both normal and crisis periods.
- However, a delayed excess transfer is quite complex and hard to control/reconcile with potentially quite complex situations to handle, e.g. what happens if there is an excess and during this “timeframe” the funds are used to pay by way of “instant payments” and are thus being used? In case a waterfall mechanism is applied to a digital euro, it should be ruled out that excess amounts are used for other transactions.
- An end-of-day rebalancing to a regular account would require a daily process to check all digital euro accounts, so its technical compatibility with offline digital euro transactions should be assessed.
- In general, averages are hard to calculate (in real time) and not immediately transparent to payer.
- Averages in a sliding timeframe (e.g. over the previous 10 days, the average end-of-day holding of a user should not exceed the limit) can be calculated and made visible to the customers directly in the wallet (e.g. “average daily balance of past x days is x



EUR exceeding limit of x EUR. This will lead to automatic transfer of digital euro to commercial bank account in 2 days”). However, these sliding timeframes and thresholds/delays need to be carefully defined and be easy to understand for users (e.g. maximum 3 different levels with initially only one daily limit and extending over a period of time). Furthermore, in combination with high level of privacy such dynamic limits may be incompatible with AML requirements, and in a crisis period deposit decreases over two days could exacerbate the crisis.

Price-based tools

- Due to the similarity between the digital euro and the non-digital euro we are of the view that there should not be a specific remuneration rate applied to the digital euro. The remuneration for the digital euro holdings should be zero as for cash.
- Should the ECB decide to apply a remuneration rate on digital euro holdings, the digital euro would become an instrument of monetary policy by steering the investment and savings behaviour of citizens and firms. In particular a remuneration rate for digital euro holdings above zero could have detrimental effects on the banking sector and financial stability, as it would make the digital euro attractive as a store of wealth. Thus, from an investment perspective the digital euro could become more attractive than commercial banks deposits (and also sovereign bonds), which could lead to large shifts from commercial banks deposits to digital euro holdings with all the negative consequences that have been described above.

In conclusion, the EACB would be against price-based tools and rather look favourably towards quantity-based tools with strict and not easily changeable low holding limits and a fairly simple waterfall mechanism based on absolute values.

EBF response to ERPB written procedure on digital euro following ERPB technical session on digital euro

26 May 2022

We welcome the ERPB involvement in the digital euro project and the opportunity to respond to this written procedure. Taking into consideration the complexity and the importance of the digital euro project and the limited time available to respond to this written procedure, it should be noted that the views expressed in our response reflect the EBF ongoing thinking at this point in time, with the information currently available.

Use case prioritisation

General comments on use case prioritisation:

The EU has an efficient, secure and well-functioning electronic payments market, where substantial efforts have been deployed to create a Single Market for payments. Today, for their retail payments, European consumers and businesses have access to a variety of payment methods and instruments to cover their different payment needs, including SEPA credit transfers and direct debits, instant SEPA credit transfers, debit and credit cards, and cash. They can initiate payments through a multitude of solutions and channels, for instance mobile banking, wallets, mobile payments, contactless payments, through Payment Initiation Service Providers and more. This reflects an active, competitive and continuously developing field, with new business models and new entrants becoming part of the ecosystem. In short, Europeans have ample choice and availability of payment methods for their purchases, be it in-shop, online or person-to-person. It should be clarified how a digital euro could complement the current payments offering and not compete with it. For the digital euro to achieve this, it should be functionally different from the existing payment solutions and be equipped with a sustainable remuneration model for all parties involved and especially for the regulated PSPs that will distribute it.

A digital euro should enhance and support innovation and therefore should not be limited and targeted to the traditional use cases (P2P, PoS and online), as this would bear the risk of the digital euro being 'outdated' from the start. The digital euro should be future-proof and it should be explored how it could contribute to meeting the few unmet needs in the market today – such as offline person-to-person payments, M2M, IoT, micro payments, as well as making some payment processes easier (e.g. vouchers, conditional, finalised, split payments, etc.) To do this we are convinced that the digital euro must be based on the newest technological frontier.

For the digital euro to be used by consumer and businesses it must provide value added, be a new payment solution whose offer is superior or different to the existing ones. In any case, it is important to preserve the stability of the banking sector and avoid crowding out

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private electronic payments solutions and therefore jeopardising intermediaries' balance sheet.

At the same time, none of the use cases discussed in our response implies a need per se or a strict preference of a central bank-issued retail digital euro, as these use cases could also be fulfilled with commercial bank-issued digital currencies.

1. What are the markets' expectations regarding the future evolution of the different use cases (in terms of growing transaction volume and value)? And specifically:

- **What are the markets' views regarding:**
 - **The substitution of cash by digital payments in the physical environment (both POS and P2P)?**

Overall, in the euro area consumers still predominantly use cash for their payments: the most recent figures indicate that 73% of the volume of Point-of-Sale and Person-to-Person transactions was carried out using cash as a payment instrument and 27% using non-cash payment instruments¹. Although the use of cash for payment transactions is declining, in the euro area this decline is not dramatic. Also, citizens' access to cash continues to be broadly ensured in the euro area mainly via traditional cash access points, i.e., via ATM and branch networks of credit institutions². Even though digital payments have been growing in recent years and have been particularly spurred by the pandemic, as well as the demographic evolution will favour the further growth of digital payments, cash will not disappear from the euro payments market any time soon; the digitally averse people will continue to use it, and it will be used for some use cases.

At the same time, we see a steady increase in recent years in the uptake of digital payments in both POS and P2P, a trend that has been strengthened due to COVID-19. This seems to also stay true after the pandemic, creating a situation where digital payments in both POS and P2P are the new normal. Within digital payments, solutions that offer availability on a large variety of mobile and smart devices, easy onboarding, fast and reliable authentication and identification, high security, user-friendly optionality for notifications are the most successful.

- **What private sector initiatives are currently taking regarding (i) programmable; (ii) machine-triggered; (iii) IoT related; (iv) micro-payments? What are the impediments (legal, technical, lack of demand, etc.) and how do you see these use cases evolving? What could be the arguments to have the digital euro playing a pioneering role (if any) in these? Please distinguish (i)-(iv) as relevant.**

In some countries, there are private sector initiatives regarding all stated use cases ((i) programmable; (ii) machine-triggered; (iii) IoT related; (iv) micro-payments. As those are

¹ ECB Study on the payment attitudes of consumers in the euro area (SPACE), December 2020

² Report from the ERPB working group on access to and acceptance of cash (europa.eu)

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highly innovative use cases in a volatile setting, making strong collaboration between different players across different industries necessary, we believe that the private sector is the best placed to develop and realize successful solutions in those fields dominated by a multitude of payment feature variations in a fast and reliable manner. This is in particular true because these use cases demand a strong market expertise and proximity to consumers' and corporations' needs. Use cases in the areas of M2M and IoT in particular are currently being pursued through initiatives by some banks in the context of tokenised commercial bank money.

For this reason, the potential of a digital euro (with value-added services provided by intermediaries) should be explored in such areas to ensure that the digital euro is as innovative as possible, while at the same time the ECB/Eurosystem should be mindful that any deployment of digital euro in this area should contribute to the innovation already provided by private sector players. Thus, it should be explored if and how a possible issuance of digital euro could support the mentioned use cases, like a "raw material" that supports advanced and innovative products. Even better, private-public cooperation in the field of solutions for such use cases would be beneficial for the EU economy as a whole.

➤ ***The future evolution of business-to-business and business-to-consumer transactions (in terms of growing transaction volume and value)?***

We expect a steady value of B2B and B2C transactions for the future. In terms of volume, we see a trend towards lower average transaction amounts, resulting in a higher number of transactions.

➤ ***What differences in rate of adoption of digital payments –over all use cases– are being observed across the different countries in the euro area?***

In general, it can be said that the rate of adoption of digital payments as well as the composition which shows the users' preferences differ a lot from country to country.

Overall, evidence from ECB payments data indicates that although an increasing use of digital payments is registered throughout the euro area, great variation exists at the country level when it comes to their rate of adoption and user preferences. For instance, the SPACE study conducted in the direct aftermath of the pandemic reports that in countries such as Ireland, Belgium and Spain "more than half of the respondents said that they were paying less with cash since the pandemic, whereas in Estonia, Latvia and Malta less than 25% said the same"(p. 23)³.

Consumer preferences aside, legislation can be a relevant factor when it comes to the rate of adoption of digital payments. This is the case e.g. in Hungary and more recently in Belgium, where by the end of 2020 most of the merchants were mandated by law to provide electronic payment options. The ECB Occasional Paper (n. 294) reports that as a result of the investments made to support this legislative turn, the adoption and use of digital payment methods is expected to "grow dynamically" in the near future (p.27)⁴.

³ [ECB Study on the payment attitudes of consumers in the euro area \(SPACE\)](#), December 2020

⁴ [Costs of retail payments – an overview of recent national studies in Europe \(europa.eu\)](#)

2. Considering the Eurosystem's preference to distribute a digital euro via supervised intermediaries, what are the market's views on how addressing the prioritised use cases will influence the strategic autonomy (i.e. tackling sovereignty challenges)?

In our view, a possible digital euro could be the introduction of a new form of currency which, alongside cash and the electronic payment services already available, could be able to offer something new and different and enable our digital economy to remain at the frontier of innovation with a truly European instrument, contributing to the long-term vision of European sovereignty in payments.

European sovereignty is best preserved by joining forces between the public and private sector in understanding and building together the best way forward so as to reduce the overall investment cost in different and possibly diverging initiatives to modernise the EU payments market (e.g. how do instant payments as the "new normal", EPI or similar initiatives and digital euro go together?), as well as ensuring full coordination among different legislative initiatives, with a view to enhancing EU-grown solutions and firms, and particularly to ensuring a level playing field with Big Techs and the international platforms.

Use cases that cover needs that are currently not covered will definitely have a positive impact on banks' business models. An essential aspect is to enable banks and other intermediaries to offer additional services in the context of the digital euro.

3. Do market participants identify other emerging market segments or use cases not covered currently in the strategic prioritisation matrix?

See part of answer no. 1 but it is very difficult to clearly identify use cases at this stage. This is an additional reason to create a "future-proof" digital euro, and not one that can resemble the current frontier of payments in euro (i.e., instant payments).

Foundational design options

General comment:

First of all, in terms of design, we believe that supervised intermediaries should be able to provide new services if the digital euro will be programmable, acting as a platform on which innovative solutions can be offered. Some of the competitive features, especially when related to programmability, can be based on a 2-tiered model to be adopted for the digital euro distribution: a first tier of programmability linked to policy decisions (such as limits and caps) and therefore governed by the Eurosystem; a second tier enabling the provision of innovative services by PSPs which could be shaped according to market needs, for both retail customers and corporates. With these digital euro features, it is also possible to combine the two foreseeable forms of the digital euro - account based or bearer instrument - so that it is no longer a choice between one or the other model. Added value of a retail digital euro would allow banks to i) offer value added services on top of a very

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basic use; ii) reduce the cost of distribution when compared e.g., to cash; iii) facilitate the performance burden of AML/KYC checks.

➤ **What are our views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?**

We view option 2 (third-party validated online transactions) as the fittest for the digital euro, as third party validation mechanisms can be configured in different ways to suit different needs and can leverage on the existing validation and authorisation mechanisms that regulated PSPs have in place as well as, and, in a future-proof approach, on distributed (but private) components, able to ensure robust controls and to enable native auditability.

At the same time, a digital euro should also cater for those situations where a lack of connectivity can limit digital transactions in presence. Possibility to conduct offline transactions, where both the payer's and the payees' devices are offline, within certain limitations (e.g. regarding maximum transaction amount, time limits etc) should be possible. Therefore, a reasonable design should combine aspects of the first and second design options: while single transaction might be conducted "offline" in the P2P-sphere, a subsequent validation through the intermediaries would be necessary.

Other important aspects to be taken into consideration are the possibility for intermediaries to conduct required AML/KYC checks in an efficient and effective manner as well as high levels of operational stability and cyber resilience (probably building on existing mechanisms in order to achieve synergies).

➤ **What are your views on privacy options for digital euro payments?**
➤ **How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?**

We recognise privacy is a fundamental right, but we deem it necessary to make a clear distinction between the protection of privacy in terms of use of customers' personal data (who processes data and how) and the concept of anonymity in the use of the digital euro. "Protection of privacy" refers to the rules for accessing and using customer data, to a system (that could work also for the digital euro) of safeguards for individuals and dynamic data management, based on the legal grounds provided in the GDPR principles such as the of "execution of contracts" and/or "explicit consent" that customers discretionally grant to use certain services whose adherence is optional. This is already enshrined in current legislation.

The second aspect refers to guaranteeing anonymity for transactions and we concur with the ECB that full anonymity is not a desirable feature as the combat of fraud, tax evasion and financial crime is an important objective. Some level of anonymity could be allowed for very small value of transactions. A programmable digital euro could also allow to easily set rules of progressive privacy/disclosure of information on transactions and build those rules intrinsically in the digital euro.

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➤ **How do you assess the role of intermediaries in the processing of users' transaction data?**

Financial entities operate as intermediaries in a two-tiered system, in compliance with financial regulation. Access to payment transaction data is essential for this compliance. Transaction controls and visibility of transaction data by distributors contribute to the fulfilment of a number of regulatory requirements, but it is also essential to the development of data-driven services.

We would like to stress that banks always protect their clients' payment accounts and payment transaction data in compliance with GDPR and (cyber)security requirements, and their deposits in compliance with legal provisions on deposit guarantee. Payment transaction data is kept private and shared only in case of a legal obligation or when explicitly authorised by the customer. In short, current digital payment means protect users' data privacy.

To the extent that all regulated PSPs could play the same current role in the payment system also with regards to a future digital euro, access to transaction data is necessary so that they can continue complying with all their legal obligations. For example, they should be in a position to handle the so-called r-transactions (exception handling), possible complaints from customers, all obligations deriving from PSD2, customer care, answering to complaints, incident reporting, strong customer authentication obligations, and PSD2 obligation to share payment account data with third party providers upon end user request. Importantly, banks, and PSPs in general, need to have access to and process transaction data in order to perform their fraud prevention duties and AML/CTF checks. It is essential that the privacy design of the digital euro (including the potential offline functionality) is consistent with the overall AML/CFT framework applicable to private payment solutions, thus preserving a level playing field, and that the privacy design does not hinder the intermediaries' ability to comply with their AML/CFT duties as obliged entities.

Furthermore, appropriate access to data for the involved intermediating bank is fundamental to support the provision of secure and convenient financial services that respond to customer needs, particularly within the data economy. In this context, data from digital euro transactions should not be precluded from being used to deliver value to the digital euro users with adequate safeguards; not factoring in this possibility would undermine the development of an open finance framework and the European data economy more broadly – both are priorities for the European Commission. Also, payment data is particularly valuable for banks in the provision of credit. Payment data records not intentions (e.g. assessed by polls), but actual purchasing decisions in real time and with great accuracy (i.e. no forecasting). This knowledge about customers allows banks to analyse risks better and provide credit more accurately and at better price.

➤ **What are your views on tools to avoid excessive use of digital euro as a form of investment?**

➤ **How do you assess the impact of remuneration and holding limits on the usability of a digital euro?**

To prevent a structural disintermediation and a digital bank run in times of crisis, the digital euro should not be used as a form of investment/store of value on a large scale. Therefore, a digital euro should be introduced with a fixed upper limit on holdings. A tiered remuneration system does not protect against outflows of bank deposits in times of increased uncertainty/crisis. Without a limit, there could be an outflow of customer

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deposits which would significantly restrict refinancing via customer deposits. As a result, credit supply would decrease and/or credit costs would increase (commercial banks would have to use other and more expensive refinancing options), or the central bank would have to fundamentally adjust and expand the collateral framework (additional collateral or lower haircuts).

We believe the digital euro shall be provided, at least in its “basic use”, with very stringent hard caps (built in by design and not only set legally, as a legal cap might be easily relaxed in times of crisis). The cap should e.g. include:

- i) the amounts that can be held in each digital euro wallet shall be capped at low levels for final consumers (both in terms of transaction and monthly amounts);
- ii) amounts exceeding the limits and be automatically converted in commercial bank money in a payment account, for consumers but especially for merchants and businesses;
- iii) specific boundaries to mandatory acceptance of a D€ which is legal tender shall be introduced (as it is the case today for cash) and set at EU level. In any case for (mandatory) acceptance, it will be important to adopt a gradual approach that takes into account the efforts required by merchants and acquirers to adapt the acceptance infrastructure and avoids a rejection by merchants.

It is obvious that tools limiting the digital euro being used as a form of investment could come along with trade-offs regarding its transactional purpose. However, the vast majority of a consumer’s daily transactions will most likely lie below any potential holding limit. If single transactions exceeding a general holding limit should be made possible, several mitigating mechanisms could be foreseen, e.g.: allowing for digital euro transactions beyond the holding limit if it can be assured that the intermediary conducts an automatic transfer between d€ and commercial bank money.

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About EBF

The European Banking Federation is the voice of the European banking sector, bringing together national banking associations from across Europe. The federation is committed to a thriving European economy that is underpinned by a stable, secure, and inclusive financial ecosystem, and to a flourishing society where financing is available to fund the dreams of citizens, businesses and innovators everywhere.

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EBF RESPONSE TO ECB QUESTIONS ON TOOLS TO AVOID EXCESSIVE USE OF THE DIGITAL EURO – OPTIONS AND IMPLEMENTATION

The EBF and the ECB acknowledge that a digital euro, could have major consequences on financial stability and monetary policy transmission. It is crucial that the ECB design of a digital euro eliminates such a possibility, taking into consideration the fundamental role of European banks in maintaining a prosperous European economy. We agree with the ECB's understanding that mechanisms for the digital euro are needed to minimise a possible outflow of bank deposits. They are also relevant to address impacts on the payment markets, help to ensure information on customers necessary for combating fraud and support the granting of credit to citizens. A shift of retail bank deposits to digital euro could have unintended consequences on the role of banks in maturity transformation, the funding of the economy as well as on the ability of fixed rates financing. A digital euro would in particular aggravate the intensity and speed of a potential liquidity crisis in times of stress, should it provide retail customers with a fast, unrestricted (or insufficiently restricted) digital channel to central bank money. Tools safeguarding against bank deposit outflow should be designed in a way that they are effective in the event of financial stress of a particular institution or a broader financial crisis.

The design of such tools should be founded on thorough assessments of available data and reliable predictions. We encourage the ECB to produce qualitative and quantitative assessments on key design choices, potential uptake scenarios and mitigants against identified risks. On this note, we welcome the research conducted in the paper *Central bank digital currency and bank intermediation* (ECB Occasional Paper Series May 2022)¹, but see that additional research is required, for example regarding the impact on the existing payments system.

Introduction of tools by legislation and design

Limiting tools should be provided with sufficient robustness, clarity and stability. They need to be able to withstand political, market and/or public pressure to provide at all times a reliable and robust frame for the provision and operation of a digital euro. There is no way to foresee already how the approaches of other central banks and private institutions that create digital money will evolve. If other currencies, existing or new, change tools significantly (for example raising thresholds for caps), the ECB will be put under considerable pressure to follow suit. Such scenarios typically materialise in times of stress or crises when there is urgency, combined with less room for manoeuvre. Therefore, we encourage to introduce tools by:

¹ [Central bank digital currency and bank intermediation \(ssrn.com\)](#)

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- Enshrining them in a legislative framework, so that they are maintained in times of financial stress or crisis.
- Irrevocable, robust and pre-determined design choices, clearly articulated before the launch of a digital euro, in line with needs of European citizens and the financial industry.

Quantity-based tools are necessary

The tools need to be sufficiently clear, simple and reliable to prevent excessive use of a digital euro, both in and outside times of stress/crisis. Price-based tools such as (tiered) remuneration are not sufficient to ensure financial stability, especially if a digital euro is promoted as the safe solution for digital money. In times of crisis, people are bound to choose what they perceive as the safest solution, even if remuneration is lower or negative compared to bank deposits. The current excess liquidity might hide a problem of cyclical disintermediation in a context of more restricted liquidity. It is fair to assume that the crowding out of deposits would be much higher without excess liquidity. A severe scenario would result in multiplying the outflows compared to normal circumstances. We therefore believe that it is imperative to abandon the idea of a soft rate disincentive in favour of more assuring quantity-based tools with hard thresholds on holdings.

Transparency and simplicity for European citizens are key to a successful uptake of a retail digital euro solution. Where quantitative and qualitative tools would be combined, this would only create confusion and complexity. Such complexity could deter the uptake of digital euro, as non-quantity-based tools (especially if combined with quantity-based tools) would not be easily understandable for consumers. Therefore, the digital euro could be perceived as user-unfriendly. It would not be easy for consumers to understand the interaction between quantity and non-quantity-based tools, their parametrisation and any possible changes made to them. We do not see benefits of a combined model of quantity- and quality-based tools that would warrant such complexity and reduced transparency for citizens.

We would welcome a dedicated impact assessment, to be made available to stakeholders for further exchange with the ECB under its investigation, before determining the specific tools. While we appreciate the ECB's strive for timely preparation for a digitally transformed European economy, such further exchange would bring the much needed clarity for the technological setup, governance and implementation by intermediaries.

Furthermore, it should be taken into consideration that remuneration on a digital euro may shed some doubt on the possible legal tender status. It does not seem clear how a digital euro – that is the digital form of central bank liability – would bear interest, while the physical form does not. Moreover, applying rates could blur the fact that the digital euro is not intended as a store of value but rather a currency and/or a means of payment. It is unclear whether they would still have the same value. Such questions need to be answered during the ECB's investigation phase.

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A hard cap for a digital euro

We call on the ECB to select a hard cap as the tool to avoid an excessive use of the digital euro. A hard cap for each individual holder will be an effective tool to avoid excessive holdings. It is a straightforward way to prevent a large shift of bank deposits, as opposed to the complexity and uncertainties of a tiered remuneration structure. A simply disincentivizing mechanism would not be effective during a crisis, where depositors' sensitivity to interest rates on a digital euro would in all certainty be very low compared to their need for safety (as shown by ECB's paper *Central bank digital currency and bank intermediation*). Consequently, in a remuneration system, the interest rate of the second tier would need to be extremely penalizing and even then would have questionable effectiveness in preventing bank runs. We propose to avoid this problem altogether, by introducing a hard cap only.

The hard cap needs to be clear and easy to understand. Citizens and intermediaries need to be well aware of the availability of a digital euro in each individual use case. The transparency brought forward by a hard cap limit would encourage the uptake of a digital euro by citizens. The latter are familiar with the concept of straightforward thresholds to limit available funds for transactions, for example from the use of credit cards. In addition to applying a familiar concept, the hard cap would make spending control easier for the individual user. This would not be the case in a tiered remuneration model.

The hard cap should be set at a reasonable amount that permits the day-to-day basic payments of users, limiting digital euro holdings at all times, while mitigating negative impacts described in this paper. European banks consider the cap's amount to be considerably lower than the suggested figure of 3000 to 4000 euros. Hence, we encourage a careful reconsideration of the threshold amount. The ECB's previously shared indication of a threshold based on cash circulation divided by citizens in the Eurosystem is not suitable to determine a final threshold. It does not consider the fact that only 20% of cash in circulation is used for payments. A significant share of cash is used for store of value, with considerable amounts being located even outside the EU. We therefore suggest a stronger focus on citizens' actual payment needs. According to ECB's 2019 data, the average amount of cash held by citizens in their wallet varied between 45 and 121 euros in the euro area². Considering these amounts, a cap threshold of 3000 to 4000 Euros appears disproportionate.

Further assessment by the banking system as a whole, with close collaboration between ECB and banks, is needed on the appropriate threshold. Also, the topic of a hard cap is closely linked to the need to control the number of wallets held per user as this will have a direct impact on the effectiveness of the cap, as well as anti-money laundering measures (combating "mule accounts"). Additionally, limits of transactions could be assessed further, considering offline use and privacy options with respect to anti-money laundering.

Different user categories needed

For quantity-based tools, it is essential to design different caps depending on the type of user, as different limits should be set for individuals and businesses. If not, the ECB would

² [Study on the payment attitudes of consumers in the euro area \(europa.eu\)](https://www.europa.eu)

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risk compromising a digital euro's attractiveness, since the two user categories have different needs for holding funds.

The ECB should avoid the complexity of setting limits in an ever-changing way, trying to keep up with needs that different types of merchants may have. Instead, the hard cap limit should provide stable and easily understandable thresholds according to the user category.

Support for a waterfall solution

Benefitting from the experience by today's payment methods, a set maximum at all times proves more transparent and user-friendly for citizens, and more efficient in management by intermediaries. We do not consider any type of average holding, nor timeframes of average holdings, to be appropriate but appreciate a fixed hard cap for holdings in connection with a waterfall mechanism.

Priority use cases for business users involve merchants receiving payments. This implies large sum payment transactions, either incoming or during the merchant's further redistribution of funds. This can lead to an overflow situation at infrastructure level, if no mitigating measure is pre-designed for a digital euro. Consequences can include additional costs, complex procedures, and potential security vulnerabilities. A waterfall account mechanism seems an adequate solution to avoid these problems and to accommodate merchants' needs. The existing account structure provides for a valuable structural advantage, avoiding costs for creation of an alternative infrastructure solution. It can also benefit from established account-focused book-keeping mechanisms of merchants, preventing a complex and costly redesign of their own internal procedures. Ultimately, the waterfall solution would avoid costly actions for a large number of market players.

Without a waterfall solution (i.e. defunding towards a bank/payments account), the holding limits or disincentives could affect recipients of large numbers of payments significantly, creating disturbances in the European economy.

No determination of limits based on averages or external metrics

Limits should be applied based on the instantaneous holdings of digital euros by citizens and merchants. Users today are already accustomed to instantaneous limits in their digital payments, for example with prepaid cards or credit cards. Limiting mechanisms based on averages – no matter if in a fixed or sliding timeframe – would negatively affect the usability of a digital euro as users would not be able to monitor and predict the remaining spending capacity at any point in time. This would also result in a burdensome control process for PSPs as they would need to continuously adjust the limit for each and every timeframe for each user. At the same time, a mechanism based on an external metric, which reflects the spending capacity of the user according to past data, does not seem a suitable tool. The metric could change over time. Also, it would raise questions on the use of a reliable and official source to establish it in the first place.

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Possible enforcement of thresholds

The possibility of imposing limits and disincentives is closely linked to the visibility of data on the owner of the wallet (individual or business) and on the available balance. Some degree of visibility is required to enforce established thresholds and waterfall solutions, and to allow practical implementation. This is important to avoid the excess of value storage in digital euro that the ECB is – rightly – concerned about.

PSPs would face challenges to secure systemically relevant enforcement of this kind. Taking on an enforcement role would significantly affect PSPs’ management and maintenance costs. They would be required to each develop their own monitoring system. Programmability could offer a solution to this challenge. Respective programmed tools would automatically engage in enforcement, for example ensuring limits of a digital euro. Other types of required controls (e.g. compliance-driven for AML/CFT) could be installed as well, with a significant advantage in terms of overall costs, and required time for development and release of changes. Programmability could foster the homogeneous implementation across all wallets.

Conclusion

ECB considerations	EBF feedback
Holding limits (digital euro not exceeding a predefined amount)	Yes. We call on the ECB to select a hard cap as the tool to avoid an excessive use of the digital euro.
Waterfall (transfer excesses to commercial bank accounts)	Yes. Without a waterfall solution (i.e. defunding towards a bank/payments account), the digital euro holding limits or disincentives could affect recipients of large numbers of payments significantly, creating disturbances in the European economy.
Different limit configurations for different user types	Yes. It is essential to design different caps depending on the type of user, as different limits should be set for individuals and businesses. If not, the ECB would risk compromising a digital euro’s attractiveness, since the two user categories have different needs for holding funds.
Averages in a fixed timeframe	No. Limits should be applied based on the instantaneous and overall holdings of digital euros by citizens and merchants. Limiting mechanisms based on averages – no matter if in a fixed or sliding timeframe

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	- would negatively affect the usability of a digital euro.
Averages in a sliding timeframe	No. See above.
External metric to determine the payment needs and related limits	No. A mechanism based on an external metric, which reflects the spending capacity of the user according to past data, does not seem a suitable tool.

Although the strategic objective of a digital euro and the way in which it would fit the European payments landscape is still an open discussion, the issue of how to avoid its excessive use for the sake of financial stability is crucial. We strongly believe in the necessity of a hard cap, however significantly lower than the currently communicated amounts of 3000 to 4000 euros. Such range appears disproportionate when compared to European citizens' cash holdings today. A waterfall solution is required to cater to the different categories of individuals and businesses.

The design of a digital euro should preserve a fair competition between public and private means of payments. The introduction of a hard cap can – contrary to soft remuneration incentives – secure this fairness properly.

We take the opportunity to note that the digital euro discussion has seen a share of references to the risk-free character of public money. We would caution on the possible unwanted side effect of such argumentation, in eroding confidence of European citizens in the banking sector and the effectiveness of the prudential framework implemented by ECB, legislators and banks up to date.

The ECB has a set timeline for the digital euro project, investing significant resources in the investigation phase. However, the issues raised in this paper require further exploration and a continued dialogue between the ECB and the financial sector to find appropriate answers for citizens, financial institutions and the Eurosystem. Such exchange would not constitute unnecessary delays in the investigation phase but rather provide insights and opportunities for both authorities and the market to find the best answers to very fundamental questions.

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About EBF

The European Banking Federation is the voice of the European banking sector, uniting 32 national banking associations in Europe that together represent some 4,500 banks - large and small, wholesale and retail, local and international - employing about 2.1 million people. Launched in 1960, the EBF is committed to creating a single market for financial services in the European Union and to supporting policies that foster economic growth.

A. EDPIA: how to support ECB & position

Transfer mechanism and connectivity

What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?

EDPIA position regarding the 3 options

We agree with the ECB analysis: a mix of option 1 (peer-to-peer validation of offline transaction) and option 2 (available on-line and validated by a third party) should be investigated further with the following approach:

- Option 2 as the baseline scenario, relying on existing intermediaries to ensure regulation compliance, as well as to provide value added services to citizens and merchants.
- Option 1 being limited to low-value and proximity transactions (including restrictions on the number of consecutive payments which potentially require regular resynchronization with an intermediary to reduce counterfeiting and other associated risks). The offline wallet may also be associated to user's personal online wallet, as an additional way to further mitigate risks

Regarding option 2 it is crucial to clearly define the roles, responsibilities, and boundaries between private sector intermediaries and the ECB, as common framework and standards are key for an efficient integration. The ECB will probably manage the back-end while intermediaries will manage the front-end.

Option 3 is the most disruptive but does not seem to be fit for purpose. It would give rise to various risks including disintermediation and loss of control: for example, no real-time transactional AML/CFT checks could take place, since no intermediaries are present in this model.

EDPIA position regarding offline payments

Overall, EDPIA is more focused on online solutions remaining at support to contribute to the discussion on full offline solutions.

Security, privacy and offline payment can't be achieved all together: there must be some trade-off.

If offline payment is made possible, some issues will come with it: complexity, (cyber)security, fragmentation of users' devices, difficulties in reconciliation. Therefore, its scope of application should be reduced and mitigation measures implemented, such as mandatory resynchronization with an online device.

Single offline solutions (such as smartcards) could benefit from further investigation, even if they are not much used today in the payment industry because of potential related risks.

However, these solutions could leverage existing acceptance networks which helps the chance of the technology being adopted and would pose a lower risk of disruption to the payment ecosystem.

It is however worth noting that this does not represent a full offline solution.

Privacy

What are your views on privacy options for digital euro payments?

EDPIA supports the “need-to-know” principle of limiting access to sensitive data by central banks to statistical, oversight and supervisory purposes while intermediaries have visibility on transaction data and users’ profiling data for AML/CFT purposes.

With intermediaries responsible for onboarding customers, for the KYC process, for the storage and management of personal data, they will also be responsible for ensuring these data respect adequate security standards and that the right data is exchanged in transactions to ensure a confidentiality level in line with regulations. Payment Service Providers have all the technical and operational capabilities to ensure the highest levels of data protection, compliance and security.

Giving the user several options on how their data can be used and exchanged between intermediaries sounds relevant. In particular, the option for consumers to opt-in for additional specific commercial services would support the development of new business opportunities by distribution intermediaries, to be able to differentiate, to improve the customer experience, and bring additional value. However, it is also important to maintain a level playing field between the digital euro ecosystem and private sector systems. Options for sharing data should therefore align with existing rules for consumers to provide access to their data in the payment context (e.g open banking under PSD2).

How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?

The concept of “greater privacy” for selected transactions can be intended as:

- Lighter AML/CTF compliance checks for low-value payments online (i.e. lesser amount of personal data to be gathered and stored).
- For offline transactions, as no intermediary is involved, transactional checks can take place only ex-post, although a regular mandatory resynchronization of the device with an associated online wallet would help mitigate risks. It is also possible to develop purpose-built payment instruments only enabled to low-risk/low-value transactions

Both models can be implemented.

How do you assess the role of intermediaries in the processing of users' transaction data?

Considering Option 2 model (available on-line and validated by a third party) intermediaries will likely have a role of payment initiation towards the digital euro backend, gathering and processing all the needed data, as well as transaction monitoring.

For privacy concerns, the same regulations should apply, as in today’s payment system. Users should have the right to consent to the usage of their personal data so private sector can use them to build and offer new innovative products or services. As above, it is also important to maintain a level playing field between the digital euro ecosystem and private sector systems. Options for sharing data should therefore align with existing rules for consumers to provide access to their data in the payment context (e.g open banking under PSD2).

Intermediaries have a critical role from an AML/CTF point of view. An appropriate business model should therefore be developed.

May 25th, 2022

4 – Tools to avoid excessive use as form of investment

What are your views on tools to avoid excessive use of digital euro as a form of investment?

It is difficult at this point of time in the ECB's reflections, and with the current level of information, to provide relevant feedback on this matter. Besides, this subject seems less relevant for our segment of the industry since it has a potentially most significant impact on the banking business

How do you assess the impact of remuneration and holding limits on the usability of a digital euro?

Considering P2P and P2B use cases, most retail payment instruments are subject to limits on holding or maximum spending for a given period and consumers; similar limits on the digital euro are not expected to affect usability.

Limits are technically easy to implement on different levels (capped storage amount, max. transaction amount), and could even be conditioned or changed dynamically depending on defined criteria or the usage context (use-case).

Remuneration can be an important factor in promoting the use of the digital euro and countering potential competition from other CBDCs or other forms of digital money (e.g. stablecoins), but its impact on usability is likely to be very limited or null. Therefore, monetary policy objectives should drive any decision regarding remuneration.

We do note that the application of interest rates could raise additional questions especially in the case of changing rates on digital euro stored in offline devices.

Response to the ECB following the ERPB Digital Euro Focus Session for the non-bank payment sector, 31 May 2022

3 July 2022

Dear Evelien,

Thank you again for your team and you making the time to meet with EPIF and the wider non-bank payment sector on 31 May 2022 for the first ERPB Digital Euro Focus Session. We take note of the provisional date of the next such Session on 5 July on possible distribution models for the Digital Euro.

In advance and during our meeting you asked us for written comments on the theme of our meeting which was potential use cases for the Digital Euro.

As you might have seen in our response during our meeting, EPIF somewhat struggled with this question. Much of the use cases will depend in essence on the design of any potential Digital Euro. We are therefore in a 'chicken and egg situation' where it is hard to identify the use cases when not knowing the design of the Digital Euro or inversely to provide advice on the design of the Digital Euro when not clear on the use cases.

The first and foremost priority therefore has to be to know the design of the Digital Euro. In essence there seem to be two alternative scenarios. Scenario One is that the Digital Euro is a new form Legal Tender. Scenario Two is that it is de facto a new payment system. Let us take these in turn.

If the Digital Euro is a new form of Legal Tender then the ECB is in effect adding a new form of distribution into the traditional monetary policy transmission mechanism where cash is one form, issued via counters and ATMs, and electronic account-based distribution via the intra-bank system is currently the other. The Digital Euro could potentially offer a third distribution channel which could be used by regulated PSPs to build innovative solutions upon.

If the ECB were to opt for Scenario Two and directly distribute the Digital Euro this would create an entirely new and separate payment infrastructure. While EPIF could see some merits in such a solution, this Scenario would widely extend the remit of the ECB, go against what the ECB had set out for itself as the purpose of the Digital Euro and importantly put into question the role and efficiency of third party payment providers such as the EPIF membership. Our membership is uniquely placed to develop and provide payment solutions for clients that have a market need. Our members are on the constant lookout for new use cases, as well as offering seamless, safe and secure payment solutions to our customers. In effect, EPIF's membership is uniquely placed to promote the acceptance of a Digital Euro across the EU.

We therefore believe that leaving the acceptance to the wider payments sector, including importantly the non-bank payment sector represented by EPIF, speaks to the Treaty responsibilities of the ECB and leave it to the payment ecosystem to act as the transmission mechanism for the Digital Euro.

In this context, you had asked us to comment on three possible, not mutually exclusive designs for the Digital Euro:

- Offline peer-to-peer validation: We believe that such a solution would replicate cash. EPIF sees potential for such a design and the possible use cases that could arise from this.

- Online peer-to-peer validation: We agree with the ECB that such a model that relies on the validation between the two parties (payer and payee) raises important questions, including in relation to anti-money laundering concerns.
- Online third party validation: We initially read this as the ECB being at the centre of a new payment system. As already mentioned, EPIF does not see value in the Digital Euro replicating existing payment systems and the ECB taking over the role of the existing payment ecosystem. We therefore feel very reassured by the explanations by you that this design also includes all other types of payment validation provided by private actors.

Just to reiterate our earlier point, the attractiveness and success of any potential use cases will depend on the exact design features of the Digital Euro. Even then, any assessment of potential use cases will remain somewhat theoretical. The existence of potential use cases does not yet in itself tell us whether they will fill a gap in the current offering of available payment solutions, whether there is real-life demand for these use cases, and whether there is therefore an economic incentive to develop them.

As a consequence, EPIF believes that a Digital Euro should be rolled out gradually and from one use-case to another. So as to facilitate such a gradual and generic approach based on market demand, we welcome that the ECB shares our assessment that the Digital Euro needs to provide legal certainty by being recognized as Legal Tender but that this does not need to go hand in hand with immediate mandatory acceptance of the Digital Euro by all parties and at the same time. Instead, acceptance should at least initially be voluntary, particularly for all merchants currently not accepting digital payments, until a particular potential use case has established itself in the market.

We hope these written comments are of use. EPIF looks forward to further collaborating closely with the ECB on this exciting and important new project.

Best regards,

Yours sincerely,



Nickolas Reinhardt, Head of the EPIF Secretariat

ABOUT EPIF (EUROPEAN PAYMENT INSTITUTIONS FEDERATION)

EPIF, founded in 2011, represents the interests of the non-bank payment sector at the European level. We currently have over 190 authorised payment institutions and other non-bank payment providers as our members offering services in every part of Europe. **EPIF** thus represents roughly one third of all authorized Payment Institutions (“PI”) in Europe. All of our members operate online. Our diverse membership includes a broad range of business models, including:

- Three-party Card Network Schemes
- E-Money Providers
- E-Payment Service Providers and Gateways
- Money Transfer Operators
- Acquirers
- Digital Wallets
- FX Payment Providers and Operators
- Payment Processing Services
- Card Issuers
- Independent Card Processors
- Third Party Providers
- Payment Collectors

EPIF seeks to represent the voice of the PI industry and the non-bank payment sector with EU institutions, policy-makers and stakeholders. We aim to play a constructive role in shaping and developing market conditions for payments in a modern and constantly evolving environment. It is our desire to promote a single EU payments market via the removal of excessive regulatory obstacles.

We wish to be seen as a provider for efficient payments in that single market and it is our aim to increase payment product diversification and innovation tailored to the needs of payment users (e.g. via mobile and internet).

ESBG written input on the 1st ERPB technical session on a digital euro

Use cases

What are the markets' expectations regarding the future evolution of the different use cases (in terms of growing transaction volume and value)? and specifically, what are the markets' views regarding:

- **The substitution of cash by digital payments in the physical environment (both POS and P2P)?**

Europe is at the forefront of innovation for retail payments. Banks and other PSPs provide European citizens with an efficient and secure payment system. Over the time, full accessibility has been provided both in terms of physical access and financial inclusion. Commercial solutions already exist and meet user's needs in all the use cases mentioned. These solutions are already efficient and secure and modifying them is not only expensive but also inefficient, without a clear added value for the customer. From this point of view, we believe it should be further assessed what gaps could be filled by a digital euro and it should be analysed whether current payments solutions could not be simply adjusted to achieve said goals. A digital euro should be built as a complement to cash and to existing means of payments. As a consequence, a digital euro should only focus on those use cases that have room for improvement in the EU in the current ecosystem, i.e., offline payments for low value transactions, although offline capabilities can also be achieved via private solutions. Switching to a digital euro for other use cases like in e-commerce journeys will require further incentives. Otherwise, their adoption will be costly and inefficient.

The only real benefit of a digital euro from a merchant's perspective would be to reduce the costs associated with the handling of cash, although it should be noted that customers already have a broad choice of electronic means of payment. Other use cases for POS and e-commerce usage would mostly replicate existing private payment instruments, and as such would not create extra benefits for merchants considering the recently discussed design of a possible digital euro.





- **What private sector initiatives are currently taking regarding (i) programmable; (ii) machine-triggered; (iii) IoT related; (iv) micro-payments? What are the impediments (legal, technical, lack of demand, etc.) and how do you see these use cases evolving? What could be the arguments to have the digital euro playing a pioneering role (if any) in these? Please distinguish (i)-(iv) as relevant.**

P2P payments are the natural use case of a digital euro. Despite some domestic P2P digital solutions that are already in place, there is a lack of a pan-European P2P digital solution.

On the other hand, it is unclear how initiatives related to machine triggering, programmable, IoT will evolve as the market is in its infancy. There is also a regulatory and legal uncertainty, which may describe why these use cases have not evolved among the regulated market participants. Although there may be a need in the market, solutions for business-initiated and machine-initiated payments that cover the listed use-cases (i. to iv.) should be provided by the private sector. For instance, in Germany the approach is to develop a standard for tokenized commercial bank money together with other stakeholders among Europe.

- **The future evolution of business-to-business and business-to-consumer transactions (in terms of growing transaction volume and value)?**

We expect a growth of B2B transactions coming from the industrial development (e. g. due to Pay-Per-Use-mechanisms or DvP-business models) and therefore an increased need of appropriate payment solutions. Since the introduction of a digital euro will most likely focus on retail-based use cases, the needs of the market can also be covered by the private sector. Having said that and especially considering that a digital euro for businesses would possibly force the structural disintermediation of banks in Europe, a retail CBDC should focus on today's use cases of cash and provide added value for P2P and PoS payments.

What differences in rate of adoption of digital payments -over all use cases - are being observed across the different countries in the euro area?

In some countries (e.g., in Germany) the use of cash is still high. Even though there is a wide range of digital payment solutions available (and the amount of transactions rises steadily), people in Germany still enjoy the advantages of cash. This is also reflected in existing cash limits that differ through whole Europe.

Considering the Eurosystem's preference to distribute a digital euro via supervised intermediaries, what are the market's views on how addressing the



prioritised use cases will influence the strategic autonomy (i.e. tackling sovereignty challenges)?

The strengthening of the EU's strategic autonomy and sovereignty in payments does not necessarily have to be solved with a digital euro, as instant payments schemes could also ensure the achievement of such a goal. In a public-private joint effort this could also enable pan-European payments, where the public is responsible for the infrastructure layer. Such a solution could potentially offer the same use cases/user experience and achieve some of the strategic goals of a CBDC, without leading to disintermediation and financial stability risks. In any case, supervised intermediaries will need a business model to be able to distribute the digital euro and fulfil the required tasks around KYC and AML-CFT compliance etc.

Do market participants identify other emerging market segments or use cases not covered currently in the strategic prioritisation matrix?

We believe a higher priority should be given to use cases where these new payment solutions could provide added value – such as programmability – rather than focus on use cases already covered by solutions provided by PSPs. As a starting point, a digital euro may be issued in a small scale to only enable P2P low-value transactions. Then over time it could be further investigated in the option to offer additional features like the settlement of smart contracts/nano transactions in digital euro and how such use cases could be offered via public/private partnership or fully via commercial bank money. It should also be noted that as of today 90% of payment transactions are of domestic nature and as such are served by existing services. Therefore, one other possible attractive market would be that of cross border transactions.

Do market participants members wish to share other comments and/or insights related to the presented analysis?

A central bank digital currency may bring benefits to financial inclusion and privacy; at the same time, it may help foster innovation and fight the threats to financial stability and sovereignty posed by global private initiatives. However, while a digital euro could serve several different policy goals, each objective would require specific design features. A one-size-fits-all approach will not work. Instead, policymakers will have to decide what goal to focus on and design a digital euro accordingly. The most fundamental goal for a digital euro would be to provide the general public with central bank money in a digitised economy. Considering that the share of unbanked in the EU is very low, the focus should be on ensuring a digital euro is easy to access and use for all. Besides, estimates suggest that only 10% of persons with disabilities and older customers may actually benefit from a digital euro.

To achieve a wide adoption of a digital euro, a CBDC has to provide additional



value compared to today available solutions. The currently discussed designs do not provide this.



Foundational design options for a digital euro

What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?

True offline P2P validation is only possible with a bearer-/token-based approach. However, irrespective of the design options, the digital euro must comply with relevant regulation (AML, CFT, PSD2 etc), and there could not be any different regulation for the digital euro. It has to be further assessed how the technological approach of offline availability (that grants a true additional value for the EU-citizens and users of a digital euro) can be matched with the current regulation and the requirements.

What are your views on privacy options for digital euro payments?

Commercial banks must have access to customer data to be able to perform regulatory checks (KYC, AML/CFT) and fraud control. As central banks will not distribute a digital euro, they will not need to access to personal data for any purpose.

How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?

Low value transactions should follow current AML-regulation. There should be the same rules for all digital payments, including CBDCs.

Any offline use of a CBDC needs to deal with the PSD2 provisions on strong customer authentication and dynamic linking to protect the customer from unauthorized payments. There must also be reconciliation procedures in place as soon as there is an online connection. In some circumstances, the validation can be based on compliance vouchers, with a “validation” taking place anyhow. The Eurosystem could also investigate the option to introduce a limit to the number of consecutive offline transactions and on the cumulative amount that can be transferred.

How do you assess the role of intermediaries in the processing of users' transaction data?

Processing personal data would be necessary for activities such as for AML/CFT checks and for the enforcement of holding limits. It may be considered that



intermediaries could process personal data to offer additional innovative online services and functionalities related to the digital euro. This would boost the innovation in the European Union.

What are your views on tools to avoid excessive use of digital euro as a form of investment?

A digital euro must be designed as an instrument for retail payments only. Therefore, it is not a matter of 'excessive use' of a digital euro as an investment tool, but rather of forbidding said option. This, in turn, would ensure financial stability.

ESBG and its members are in favour of limits to individual holdings of digital euro. A cap to digital euro holdings would prevent a sudden shift from commercial bank deposits to central bank money. Said limits to holdings should take into consideration not only the cash needs for payment purposes in the euro area, but also the net salary differences that exist between European countries. Alternative options like an interest-bearing digital euro above a certain threshold will not be effective in a situation of crisis in our view.

How do you assess the impact of remuneration and holding limits on the usability of a digital euro?

Holding limits or disincentives to the store of value function would not affect the usability of the digital euro in P2P payments. On the other hand, limits and disincentives to the store of value function would affect the usability of the digital euro in C2B payments and business-to-business payments, as the volume of this kind of transactions is usually higher than P2P payments. Nevertheless, limits should not be reduced for this reason if we do not want to deal with financial instability and the disintermediation of credit institutions.

Limits on individual transactions already exist in different member states for different payment methods, such as cash and instant payments. In addition, there are limits for pre-paid cards in terms of AML controls in the existing EU regulation.

A digital euro – ECB-ECSAs bilateral exchange ESBG written input on tools to manage the digital euro in circulation

QUANTITY-BASED TOOLS

- ***What is the difference in the operational complexity for commercial banks of the following quantity-based tools?***
 - o ***Different limit configurations for different user types (e.g. a holding limit of x for individuals and y for businesses).***

First of all, to ensure financial stability and avoid disintermediation, ESBG and its members believe there must be mechanisms in place that ensure the European Central Bank (ECB) can manage the quantity of digital euro in circulation used for transactions. External studies find the flight of retail deposits resulting from the introduction of a digital euro could exceed 15% of the total amount of retail deposits in the case of 3,000 digital euro wallet used in full by depositors. Extrapolating at Eurozone level, the level of deposits flight could range between €1 and €7.4 trillion. The issue would further increase when adding corporate deposits. In addition, the lost stable retail deposits would have a direct impact on liquidity ratios (LCR outflow rate at 5%, NSFR ASF at 95%) and there could be additional 2nd round effects on LCR and NSFR if the supervisor decides to alter the stability of the bank deposits which remain on their balance sheet (leading to higher LCR outflow rate, lower NSFR ASF rate). Moreover, internal liquidity stress test may be even more binding than the regulatory metrics.

Therefore, a digital euro must be designed as an instrument for retail payments only, thus avoiding any possible use of it as an investment tool. ESBG and its members are in favour of limits to individual holdings of digital euro. More in general, said limit should take into consideration not only the cash needs for payment purposes in the euro area, but also the net salary differences that exist between European countries. Without holding limits, EU citizens may convert all their deposits into digital euro in a matter of seconds, with catastrophic consequences on the banking system. A limit of €3,000





would imply a deposit flight up to 18% and a limit of €10,000 could mean the loss of 30% of deposits. This deposit outflow would not be manageable for most banking business model in the EU and would likely force banks to deleverage massively. The impact on balance sheet would be even more severe for savings and retail banks that have currently little to no access to market funding. The deposit outflow would not only impact liquidity, but also the volume of credit provision. The substitution of deposit accounts or the reduced use of bank deposit accounts by customers will inevitably lead to a reduced knowledge of customers and their solvency. This would impact client scoring and banks' risk management with ultimately more stringent lending conditions for some categories of lower-income customers or even a risk of eviction of these populations from bank lending.

We do not consider fixed limits on holdings/transactions as hampering the uptake of a digital euro, as limits on individual transactions already exist in different member states for different payment methods, such as cash and instant payments. In addition, there are limits for pre-paid cards in terms of AML controls in the existing EU regulation. Therefore, we believe those limits and changes in the regulation can be applicable to the digital euro without significantly impacting its acceptance or usage. In this regard, policy framework limiting the holding of digital euro should be robust and transparent, ensuring that it cannot be changed for example due to political pressure in a crisis situation.

Therefore, considering financial stability, we think that the implementational and operational complexity would be way lower in case limit configurations were the same for all user types. We advocate for low and stable limits, notably because the ECB positions the digital euro as a retail means of payment. As such, we also believe the digital euro should not be used for providing citizens with their major sources of income (e.g., salaries, pensions, and other social welfare payments). Actually, the limit should be there only for retail consumers, as the digital euro should not be used for B2B nor B2C payments. Should corporates also be entitled to hold a digital euro account without proper caps, additional liquidity outflows would occur. Accordingly, corporates should only be on the "receiving side", receiving digital euro payments with an automatic or daily waterfall mechanism to convert the digital euro into commercial bank money.

We also believe it would very much depend on how many different tiers or categories will be defined. The simplest option would be to set two configurations, for individual and businesses, although in some cases it may be difficult to identify a customer as retail or corporate, especially for individual and/or family businesses. But if more



elaborated configurations (such as annual turnover, volume of assets of each business, type of business, etc.) were established, operational complexity would increase due to difficulties to identify the correct category of each customer. If limits were established based on elements such as the annual turnover, a certain offset should be defined as these figures are not immediately known at the beginning of the year. In any case, any differentiation should be based on clear parameters that are already collected by authorised distributors of an eventual digital euro. Any such special rule should apply for all digital payment methods, to ensure simple and easy regulatory frameworks for consumers as well as level-playing field on the payments markets.

- ***Averages in a fixed timeframe (e.g. the average end-of-day holding of a user during a month should not exceed the limit).***

Limits based on averages holdings (fixed or sliding timeframe) would negatively affect the usability of the digital euro as users would not be able to monitor and predict the remaining spending capacity at any point in time. Based on experience so far with other products and services, these design options would not bring serious operational risks related to implementation or processing. However, it should be considered that in some cases there might be some 'peak days' during a defined period - such as at the end of the month. Therefore, configuration only based on averages during a period without adding anything more - i.e., maximum daily or transaction limit - could be dangerous, because analysis could only be performed at the end of the defined period and there could be the possibility that user had been constantly exceeding average defined.

Moreover, we think that in this case it would not be possible to run ex-ante controls: only ex-post check could be done. If this were to happen, which controls should be deployed to prevent his excess to be repeated? In case the ECB resorted to such types of control, we believe that they should not be defined standalone but accompanied with complementary ones.

- ***Averages in a sliding timeframe (e.g. over the previous 10 days, the average end-of-day holding of a user should not exceed the limit).***

We consider this option is quite similar to the previous one. Limits based on averages holdings (fixed or sliding timeframe) would negatively affect the usability of the digital euro as users would not be able to monitor and predict the remaining spending capacity at any point in time. Overall, it may still bring credit risk, but we do not see



critical issues in both the implementation and the processing phase. Moreover, it is probably more effective and easier-to-deploy than the previous option (averages in a fixed timeframe).

- ***External metric to determine the payment needs and related limits (e.g. holding limit for businesses of x% of their annual revenue).***

We consider this option would not work for many reasons. Banks would be forced to retrieve and update statistics for all their clients on a rolling basis. It should be noted that corporates declare their revenues and other financial results on yearly and/or quarterly basis. Moreover, other aspects should be considered: revenues could be not lineal all along the year (perhaps a certain concentration on Christmas time); there may be increase on sales Year-Over-Year; mechanisms to prevent operations to be stopped with reasonable explanations should be put in place and a certain offset should be taken into account (as volumes are not known on January 1st every year).

REMUNERATION-BASED TOOLS

(Remuneration would be issued/attributed by the central bank)

- ***What is the operational impact on commercial banks?***

A digital euro should not have a Central Bank remuneration (positive or negative) as we do not see that would be efficient tools to protect deposit outflows. Also, remuneration could lead to asymmetries between cash and digital euro with potential implication on different values among central bank money (cash vs digital euro). If the question refers to processes and not to the financials, then this will bring the necessity of building parallel infrastructure or to build an independent product/service. In accordance with Directive 2014/92/UE, individuals shall not have more than one digital euro wallet/account. If individuals were allowed to have more than one wallet, especially if in different jurisdictions, more complexities in processing payment and executing the proper AML checks would arise.

- ***How can this be done knowing that the central bank would need to ensure the right remuneration is applied, while at the same maximising privacy and not seeing user's information (e.g. individual holdings and transactions)?***

A digital euro should not be interest bearer. The ECB should rely on data provided by authorised distributors/actors in the market (which



we assume will be duly authorised and subject to inspection). In case it was decided that the ECB acts as 'inspector' of data, information should be provided in an anonymized way (tokenized?) and again the ECB should rely on information shared by organisations tasked with the distribution/management of a digital euro.

- ***What would be the optimal approach to tiered remuneration?***

We do not see benefits nor consider it as an optimal approach.

**ETPPA response to
ERPB technical session on a Digital Euro questions from 4-May-2022**

Item 3 - Use case prioritisation

- 1) What are the markets' expectations regarding the future evolution of the different use cases (in terms of growing transaction volume and value)? and specifically:
 - a) What are the markets' views regarding:
 - i) The substitution of cash by digital payments in the physical environment (both POS and P2P)?
 - (1) [The substitution of cash is firmly on its way. Electronic payments are growing across all use cases, incl. POS and P2P](#)
 - (2) [There is no apparent need to accelerate that](#)
 - ii) What private sector initiatives are currently taking regarding
 - (1) programmable
 - (a) [Ethereum smart contracts](#)
 - (b) [Other cryptocurrencies](#)
 - (c) [Stablecoins](#)
 - (d) [DeFi](#)
 - (e) [Commercial bank tokens](#)
 - (f) [EMI tokens](#)
 - (2) machine-triggered
 - (a) [PPI Study: Internet of Payments \(IoP\)](#)
 - (b) [ThyssenKrupp Elevator: Predictive Maintenance](#)
 - (c) [Positive City Exchange](#)
 - (3) IoT related
 - (a) [IOTA \(MIOTA\)](#)
 - (b) [IoTeX \(IOTX\)](#)
 - (c) [MXC \(MXC\)](#)
 - (4) micro- payments?
 - (a) [Some current offers \(see Wikipedia Micropayment\)](#)
 - (i) [Dropp, Flattr, Jamatto, M-Coin, PayPal, Swish, Tikkie, Blendle](#)
 - (b) [But history shows mostly failures:](#)
 - (i) [IBM Micro Payments, iPIN, Millicent, NetBill](#)

- (5) What are the impediments (legal, technical, lack of demand, etc.)
 - (a) market fragmentation
 - (b) lack of standards
 - (c) advertising-based alternatives
 - (d) freemium models
- (6) How do you see these use cases evolving?
 - (a) demand will raise rapidly for all these cases
- (7) What could be the arguments to have the digital euro playing a pioneering role (if any) in these? Please distinguish (1)-(4) as relevant.
 - (a) a digital euro could be very supportive for all 4 cases, but especially to ignite (4) micropayments
 - (b) the other 3 will see private tokens coming soon
- iii) The future evolution of business-to-business and business-to-consumer transactions (in terms of growing transaction volume and value)?
 - (1) Volumes and values will increase of course
 - (2) But there are plenty of digital payment options in the B2B and C2B space
- b) What differences in rate of adoption of digital payments – over all use cases – are being observed across the different countries in the euro area?
 - i) Only P2P is not seeing a dramatic growth from cash to digital
- 2) Considering the Eurosystem’s preference to distribute a digital euro via supervised intermediaries, what are the market’s views on how addressing the prioritised use cases will influence the strategic autonomy (i.e. tackling sovereignty challenges)?
 - a) we can’t see any issue in this regard
- 3) Do market participants identify other emerging market segments or use cases not covered currently in the strategic prioritisation matrix?
 - a) no apparent need to include more uses cases, the main ones are covered
- 4) Do market participants members wish to share other comments and/or insights related to the presented analysis?
 - a) Yes, we believe that there are more fundamental questions to be asked
 - b) Where is the strongest demand?
 - i) Digitisation of cash
 - (1) P2P
 - (2) Offline
 - (3) POS
 - (4) Anonymous digital payments
 - c) Where is the biggest threat?

- i) Bigtech money
 - (1) Easy access - Bigtech apps are omnipresent on every mobile
 - (2) Ease of use - Bigtechs provide best in class, minimal friction flows
 - (3) Realtime - no settlement delays
 - (4) Low or zero cost
 - (5) International transfers in real-time, no FX, low cost
- d) How to address the biggest demand and threats
 - i) Focus on digital cash - anything else would be hard to explain
 - ii) Anonymous up to legal limits and strong privacy thereafter
 - iii) Bundle with EU Digital Wallets
 - iv) Enforce low/no cost
 - v) Maximise usability and avoid any unnecessary friction

Item 4 - Foundational design options

- 1) What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?
 - a) it should be offline peer-to-peer validated
 - b) online third-party validated can be offered by commercial bank money
 - c) online peer-to-peer would not allow all relevant use cases
- 2) What are your views on privacy options for digital euro payments?
 - a) How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality?
 - i) low-risk, low-value payments must remain anonymous
 - ii) strong privacy is required for mid- to high-value transactions
 - iii) offline is a necessity
 - b) How do you assess the role of intermediaries in the processing of users' transaction data?
 - i) there should not be any intermediaries in the settlement process
 - ii) the role of intermediaries should relate to
 - (1) provisioning of wallets
 - (2) KYC and issuing of access credentials
 - (3) loading and unloading of wallets (conversion to and from CoBM)
 - (4) security of wallets
 - (5) value-added services

- 3) What are your views on tools to avoid excessive use of digital euro as a form of investment?
- a) How do you assess the impact of remuneration and holding limits on the usability of a digital euro?
 - i) hard limits may be required for the anonymity threshold
 - ii) hard limits for total balance per wallet would be difficult to implement
 - iii) incentivising non-excessive balances via remuneration is preferable

Brussels, 25 May 2022

EuroCommerce contribution to the ERPB technical session on the digital euro

Feedback request

What are your views on the three foundational design options for a digital euro (i.e. offline peer-to-peer validated, online third-party validated, online peer-to-peer validated)?

Indeed, focus for preliminary design of a digital Euro should be placed on options 1 and 2. While typically most merchants will have stable (ethernet) internet connectivity to process transactions via their existing infrastructure, it cannot be guaranteed that mobile internet connectivity will be available in all merchant premises. Design option 1 can therefore be regarded as a valuable back-up alternative in case neither merchant nor consumer are able to connect. In case of a non-tokenised digital euro, online capability will still be required, not necessarily for the exchange of transaction details but for clearing and settlement of the digital euro transaction. This would then raise the question as to how a secure device without internet connectivity would be connecting to clearing and settlement mechanisms?

In addition, technical developments of such solutions should inevitably focus on resolving how secure hardware devices can be engineered to avoid any manipulation and forging. How easily can transaction data be forged in a scenario where no validation or authorisation takes place, but purely reliance on secure hardware device?

With respect to design option 2, we agree with your analysis that “digital euro available online and validated by a third-party is desirable and appears to be the most feasible option in the near future.”

Regarding design option 3 (peer-to-peer validation of online payments), it is not entirely clear as to how such transactions are going to be processed. Will online peer-to-peer validation rely strictly on the secure element/device, or will transactions also be validated within a blockchain environment? If such validation is indeed only going to be based on secure element, then please also consider the security concerns raised for option 1. In such scenario, peer-to-peer validated online transactions should then also only be available for low value transactions? Otherwise, high risk for money laundry, again depending on how confident the engineers and developers are with respect to the resilience of secure devices.

However, if DLT-based validation will play a role for option 3, then further information will be required. A tokenised digital euro might then be a concept to be further explored as it bears some advantages that cannot be matched with a classic third-party validated and account-based setup.

Please find below an overview of how we believe the different design options perform based on the criteria set out by the EuroSystem.

	scenario 1 offline P2P validated	scenario 2 online validated by third party	scenario 3 online P2P validated
Desirability criteria			
Coverage of high-priority use cases	No. Only available for low value POS and P2P payments	Yes, provided that internet connectivity is available	Yes, provided that internet connectivity is available. Will this only be an applicable option for low value transactions? When internet connectivity is granted as precondition, why shouldn't the transaction be validated outside the secure device environment (in blockchain environment)?
End-user value perception / focus group	Might allow concerned citizens to continue to transact with close to anonymity. Limited usability as only applicable for low value transactions might be exploited for money laundering purposes if no checks at all for low value transactions	User experience will be close to already existing digital payment solutions. Citizens more concerned around anonymity will be less in favour	
Policy considerations	until which threshold will transactions be allowed to be initiated without validation/checks in an offline mode? What will be the AML/CFT impacts? How safe are secure devices really? Can code or data not be forged? Should not every 5th transaction be checked/authorised online, regardless of the payment amount (Art 11. RTS on SCA)?	Closely related to privacy related question: How much data will need to be sent to third party to be able to successfully authenticate/authorise transaction?	Will thresholds also need to be considered for this scenario? If validation only relying on secure device, then what is the associated risk regarding AML/CFT, especially if no thresholds will be considered for such scenario?
Possibility to enable design features (privacy, remuneration tools and quantitative limits)	Not available Linking to merchant's loyalty or value-added services will not be available. Digital receipt and other services will not be available (at least not at the time of the transaction initiation)	Yes, should be possible	Yes, should be possible
Implications for future design decisions	If no third-party validation is performed, who will be liable in case of loss?	n/a	If no third-party validation is performed, who will be liable in case of loss?
Dependencies on external stakeholders	Manufacturer of secure devices.	Third party validation provider	Manufacturer of secure devices.

	scenario 1 offline P2P validated	scenario 2 online validated by third party	scenario 3 online P2P validated
Feasibility criteria			
Technical considerations	<p>Under which circumstances can on-device/offline authentication be satisfactory when transacting?</p> <p>Will all transactions have to be authenticated? And if not, what will be the logic determining whether authentication is needed or not? Could such logic be misused?</p> <p>How can it be guaranteed that relevant pieces of data/strings are not copied or forged when transacting in offline mode?</p> <p>Will certified trusted hardware modules be able to perform such checks?</p> <p>How can it be assured that “trusted hardware” modules are indeed secure? Can they not be forged and exploited in an offline mode?</p>	<p>What if third party is unavailable? How can system outages be mitigated?</p> <p>Will multiple third parties be able to verify a single transaction (as backup)?</p>	<p>same as scenario 1</p>
Legal feasibility	<p>How will processes for declaring forged offline digital Euro look like?</p> <p>Who’s liable? Will merchants be recompensated when they accepted forged digital Euros? By whom?</p> <p>Who will be responsible for defining and managing risk parameters relevant to offline transactions – social scoring?</p>	<p>To what extend will existing legislation need to be amended to allow third parties to perform the validation?</p> <p>Link to privacy, AML and CFT</p>	<p>Will thresholds also need to be considered for this scenario?</p> <p>If validation only relying on secure device, then what is the associated risk regarding AML/CFT, especially if no thresholds will be considered for such scenario?</p> <p>B11 comments also valid here</p>

What are your views on privacy options for digital euro payments? How do you assess greater privacy for low-risk low-value digital euro transactions and offline functionality? How do you assess the role of intermediaries in the processing of users' transaction data?

We agree with the preliminary analysis on privacy options as outlined by the Eurosystem. Although an approach based on full anonymity cannot be feasible, it should still be considered as to how a maximum level of anonymity can be granted for the users of the digital euro. Surely, due diligence checks will have to be performed when onboarding, but how many data elements will be required to fulfil such obligations? How can it be guaranteed that the digital euro will be accessible to the vulnerable and unbanked members of society (e.g. citizens without a fixed residence). Furthermore, we believe that close to full anonymity can be targeted when users are transacting in an offline environment.

As a significant portion of society will be somewhat sceptical towards sharing personal data for the sake of transacting using digital euro, it will need to be made very clear that neither transactional, nor personal data will be visible to the Eurosystem. Any communication regarding the handling of anonymised or aggregated data which may be available to the Eurosystem for analysis purposes will have to be drafted with outmost care as to not amplify already existing concerns of said sceptical portion within society.

Regarding the privacy option “non-transparent to third party”, we assume that such setup would only be feasible in connection with foundational model 3 – where online P2P validation takes place. As outlined in the foundational option matrix above, such a setup will ultimately bear risks regarding AML, CFT but potentially also in terms of monetary policy and regulatory oversight. We would therefore recommend focussing more on current baseline option, as well as “Selective privacy” option.

With respect to the current baseline privacy option “transparent to intermediary”, we understand that transaction data will need to be visible to intermediaries, especially when foundational option 2 is considered – otherwise, transactions cannot be validated. Data on user's profiling should only be granted to intermediaries if absolutely required. Questions we would like to raise in connection to this privacy scenario are: How can tokenisation allow for higher degree of privacy? Will AML/CFT checks be performed for each and every transaction or will it be based on a risk-based approach?

The approach of “selective privacy” sounds a bit more nuanced compared to the alternatives. Why should intermediaries be granted default access to data if it is potentially not legally required (as proposed in current baseline scenario)? We would recommend further exploring this option, also in the interest to accommodate those citizens that are concerned about the degree of data processing by third parties/ institutions. We would therefore strongly encourage the Eurosystem to further explore privacy options beyond the baseline model, as outlined in slide 15 of the presentation.

What are your views on tools to avoid excessive use of digital euro as a form of investment? How do you assess the impact of remuneration and holding limits on the usability of a digital euro?

Whatever option the Eurosystem is considering, it is important that its implementation is easy and understandable for its users. Introducing holding limits appears to be an appropriate alternative. Linking a digital euro wallet to the user's current account might allow excessive amounts of digital euro to automatically be settled onto the current account as commercial bank money.