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From: Presidency
To: Working Party on Financial Services and the Banking Union (Digital Euro Package)
Financial Services Attachés

Subject: Single currency package - Digital euro WP meeting on 1 April - Presidency Discussion Note on privacy

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Polska Prezydencja w Radzie UE
Polish presidency of the Council of the EU
Présidence polonaise du Conseil de l'UE

Digital Euro Regulation
Brussels, 1 April 2025

Presidency discussion note
Discussion on privacy



1. Introduction

In the CWP meeting on 30 May 2024, Member States discussed Articles 34 to 36 on data privacy. In their written comments on the Belgian Presidency's legacy drafting proposals, some Member States indicated that they would welcome more information from the ECB on the planned privacy and data sharing model. Further background information was therefore provided by the ECB in a technical seminar on 6 March 2025 on data flows and privacy preserving mechanisms in the digital euro service platform (DESP) back-end infrastructure.

The ECB explained that guaranteeing high levels of privacy has been at the core of the design of the DESP's back-end infrastructure: it ensures that the ECB will not be able to link transactions to the identity of users or infer any of their behaviours and identity attributes based on the data it processes. Furthermore, the ECB explained that the Digital Euro Regulation allows for the strict segregation of data, both between PSPs and the DESP, to ensure that only PSPs can directly identify end users and link user identities to individual transactions or balances, and between the ECB and Providers of Support Services (PoSS). The DESP consists of multiple components, allocating the operation of some components within the DESP to PoSS, with contractual safeguards on the governance of data, which will prevent any linking or onward transmission of personal data that shall only be used for specific purposes and when strictly necessary.

Section 2 of the note provides some proposed follow-ups to the technical seminar provided by the ECB.

2. ECB technical seminar: follow-up

The ECB explained how it operationalises the principles of data segregation, data minimisation and pseudonymisation by allocating tasks to different DESP components. Given the importance of ensuring a high level of privacy for the digital euro, the Presidency proposes some drafting suggestions to provide further clarification of the legal framework for some of these tasks. The Annex to this note provides an overview of the components of the DESP presented by the ECB and how they relate to the provisions on data processing in the Regulation.

2.1. General principles

In the technical seminar on 6 March, the ECB pointed out that privacy enhancing techniques have been at the core of the design of the digital euro back-end infrastructure and that the digital euro will come with a best-in-class privacy design. This is supported by the application of general principles:

Data segregation: the ECB explained that it will ensure the strict segregation of data between PSPs and the DESP, so that only PSPs will know the identity of the end user and can link it to individual transactions or balances. The ECB will also apply this principle within the DESP between the ECB and PoSS, as according to the Regulation the ECB may confer certain tasks upon PoSS. Splitting the allocation of tasks with PoSS and putting in place contractual safeguards will prevent the linking or onward transmission of personal data.

Data minimisation: the ECB explained that personal data shall only be used by each provider of services in the DESP for specific purposes and when strictly necessary. For example, the ECB explained that it will have no access to payment authorisation data, e.g. information on the payer and payee, during the settlement process as this information will be exchanged between the involved PSPs via end-to-end encryption.

Pseudonymisation: the ECB showed that the identity of users is pseudonymised via the use of a hashed user identifier and user aliases.

Furthermore, the ECB described how it will apply state-of-the-art security and privacy-preserving measures, e.g. by encrypting the exchange of data in digital euro payment transactions between PSPs and by using surrogate values, so that in the event that hackers maliciously intercept payment transactions, they cannot use the surrogate value to obtain the user's information.

2.2. The user alias

In a non-paper prepared for the CWP meeting on 23 October 2023, the Commission explained that the user alias is a pseudonymous identifier that is unique to a given digital euro payment account. It explained that the user alias includes a digital euro payment account number and that for user convenience purposes, in addition, users may on their own initiative register more user-friendly proxies, such as phone numbers. This section further elaborates on both forms of the user alias, and their implementation by the ECB.

The digital euro payment account number (DEAN)

The Digital Euro Regulation establishes in Article 22(3) that each digital euro payment account shall have a unique digital euro payment account number. The ECB explained in the technical seminar that it implements this Article by setting up a component in the DESP called the DEAN directory, which creates digital euro account numbers (DEANs). The DEAN directory creates a unique DEAN at the request of the PSP during the user's onboarding, ensuring that PSPs can assign a mandatory and unique DEAN to each user and for each account they provide. That means that the DEAN can only be linked to a user's identity by the PSP and the user themselves. As the DEAN directory only contains the DEAN and the identifier of the associated PSP, the ECB cannot link the DEAN to a user's identity.

The DEAN and its link to a specific PSP are critical data elements for digital euro payment initiation and pre-settlement validation (between the PSPs) of online digital euro payment transactions. The link between a DEAN and the relevant PSP is necessary to allow the routing of payment instructions between PSPs. Therefore, the DEAN directory would be operated by the ECB itself. By creating the DEANs, the ECB would facilitate the exchange of messages between PSPs as referred to in Article 35(1)(a), e.g. for payment initiation.

The proxy alias

As explained in the Commission non-paper prepared for the 23 October 2023 CWP discussion and as explored in the ECB's investigation phase of the digital euro project, offering users the possibility (only on their own initiative) to use proxy aliases to make

payments is an essential element in future-proofing innovation in digital euro payments. This would allow the digital euro to cover the growing use case of payments initiated via mobile phone numbers and make it a payment instrument that can be used in the widest possible range of payment scenarios across Europe: users may wish to register optional proxy aliases to their digital euro payment accounts in addition to the compulsory DEAN, as these proxy aliases may be easier to remember than the DEAN. Current private payment solutions offer users the possibility to transfer money to other persons by using proxy aliases, mobile phone numbers being the main example. Users should be able to decide whether or not to link a proxy alias to their DEAN. If users wish to do so, they would provide their PSP with the proxy alias, and in doing so they would provide their consent for the proxy alias to be stored in the DESP. The PSP would then inform the DESP. The Spanish Presidency already proposed to clarify in the Regulation that the user alias includes the digital euro payment account number (implemented by the ECB as the DEAN) as the compulsory alias, as well as possible proxy aliases, and that the Regulation should remain neutral as regards the quantity and type of user aliases in view of possible future innovations.

Ensuring data segregation: DEAN directory and Alias look-up

While the DEAN directory will be operated by the ECB due to the criticality of the data points for digital euro payments, the ECB indicated its intention to ensure adequate implementation of the data segregation principle and to ensure that the ECB cannot identify the link between the DEANs and other user aliases as part of day-to-day payment processing. This includes the DEAN, which therefore will not include an identifier of the PSP, as is the case with IBANs today, and which will be created by the ECB.

When processing digital euro payments, the PSPs need to know which other PSP is providing the account of a counterparty identified by the alias (DEAN or other alias) shared at the moment of payment initiation. The PSP shall therefore contact a component of the DESP to (i) identify the PSP associated to a DEAN; and/or (ii) identify which DEAN and PSP are associated to a certain proxy alias upon payment initiation. By delegating such processing to a PoSS, the ECB cannot directly link any user alias to other information processed in DESP, such as information processed for the settlement of transactions.

Therefore, user aliases are to be registered and linked to the corresponding DEAN in the alias look-up component, which would support the day-to-day processing of payment by PSPs. To ensure the application of the data segregation principle, the component is to be operated by a PoSS. The ECB would thus not be able to link DEANs to other information in the DESP and would not have access to proxy aliases linked to DEANs. The alias look-up component will receive the information on a DEAN and allocated proxy aliases from the PSP. As this service would be optional for the user, not every DEAN would be complemented by proxy aliases in the alias look-up component.

By maintaining the alias look-up and the DEAN directory as separate components, the ECB would at the same time both be able to create the DEAN (a necessary task since the DEAN is not specific to any individual PSP) and ensure that it cannot directly identify digital euro users.

Proposed way forward

As described above, the implementation of the DEAN directory fulfils the requirement in Article 22(3) that each digital euro payment account shall have a unique digital euro payment account number. It creates the DEAN (a pseudonymous identifier) and links it to the relevant PSP, to support the exchange of messages between PSPs as provided for under Article 35(1)(a).

The Spanish Presidency already introduced the option for digital euro users to receive payments by providing a proxy alias to payees in its definition of user alias in Article 2(28). This drafting suggestion also makes it clear that it would be optional for a digital euro user to request the linking of additional proxy aliases to their digital euro payment account.

Furthermore, the drafting suggestion respects technological neutrality. This is important in order to cater for any new proxy aliases that might become available in the future – while currently a mobile phone number might be the most common proxy alias, this might change in the future as other identifiers may become more common. The Presidency suggests adding an additional Article 22(3a), to ensure that PSPs shall allow the use of proxy aliases by digital euro users. The Presidency also suggests providing clarity in Article 22(3) and Article 22(3a) on the implementation of these paragraphs.

To facilitate the use of proxy aliases and the linking of aliases to the PSP providing a digital euro account and proxy aliases to DEANs in the DESP, while ensuring that the ECB cannot identify individual users by linking a common proxy alias, such as a mobile phone number, to a DEAN, the Presidency proposes a new legal basis for the processing of personal data by PoSS in Article 36(1).

Please note: **text in bold red = ES PCY**, **text in bold = BE PCY**, **text in bold blue = PL PCY**.

Proposal for new recitals

Justification digital euro payments account number infrastructure

xx) To ensure an accurate and secure digital euro payment execution, each digital euro user should be associated to a digital euro payment account number. To ensure that the digital euro payment is settled, this number should be created by the European Central Bank and allow the European Central Bank to identify the digital euro service provider providing this account. Only the digital euro payment service provider should be able to identify their users based on the digital euro payment account number.

The European Central Bank should keep the list of created digital euro payments account numbers and the list of the digital payment service providers structurally and logically separated from the digital euro payment settlement component.

Justification proxy alias infrastructure

xy) Already today, payment services based on another alias than IBANs are provided in the EU. In addition to compulsory aliases, such as the digital euro payment account number, payment service providers should therefore be able to provide a payment service that allows the execution of a digital euro payment by another alias when requested by the digital euro user. This should contribute to the uptake of the digital

euro. Such other user aliases could include a phone number. The digital euro user would register these aliases with the digital euro payment service provider. Only the payment service provider should be able to identify their users based on the additional aliases.

To ensure an accurate and secure execution of the digital euro payment initiated by optional aliases, any payment service provider needs to be able to link the additional alias with the digital euro payment account number. To ensure that any payment service provider can retrieve the digital euro payment account number from any optional alias and reliably link the alias with the digital euro account numbers across the Union, a single alias look-up service should be provided as part of the digital euro infrastructure. This service would ensure that the payee alias is not transmitted with the payment, in line with the data minimisation principle. A comparable service currently exists in payment service schemes.

The information on optional aliases in the alias look-up component should be kept securely and separately from the digital euro payment account component and neither the European Central Bank, nor the national central banks should have access to it.

Article 2(28) Definitions

28. 'user alias' means **an account-specific unique** pseudonymous identifier, **created by the European Central Bank ~~or~~ and national central banks upon request of the payment service provider**, used to protect the user's identity when processing digital euro payment transactions that can only be attributable to an identifiable natural or legal person by the payment service provider distributing the digital euro or by the digital euro user, **including a compulsory alias (the digital euro payment account number) and, if requested by a digital euro user, additional proxy aliases that can also be linked to the account;**

Article 22 Accessibility and use

(...)

3. Each digital euro payment account shall have a unique digital euro payment account number **created by the ECB.**

3a. Payment service providers shall allow the use of additional proxy aliases upon request of the digital euro user, in addition to the digital euro payment account number. The ECB may facilitate the use of proxy aliases together with the unique digital euro payment account number. The ECB may confer the task of facilitating the use of proxy aliases onto a provider of support services.

(...)

Article 36 Processing by providers of support services

1. Where the European Central Bank decides to confer tasks referred to in Articles 22, 27 and 32 upon providers of support services providers of support services shall provide payment-related services across PSPs. In such a situation, **providers of support services –payment service providers** perform a task in the public interest, where they process personal data for the following purposes:

(a¹) supporting the use of the unique digital euro payment account number together with optional user aliases in accordance with Article 22(3a);

(a) supporting the prevention and detection of fraud across payment service providers in accordance with Article 32;

(b) supporting the exchange of messages for the resolution of disputes in accordance with Article 27.

2. For the purposes referred to in paragraph 1, Annex V lays down the types of personal data.

3. The Commission is empowered to adopt delegated acts in accordance with Article 38 to **update supplement or amend, including deletion**, the types of personal data listed in Annex V.

4. The processing of personal data for the purposes referred to in paragraph 1 The European Central Bank, national central banks and providers of support services shall only take place when appropriate technical and organisational measures including state-of-the-art security and privacy-preserving measures are implemented to ensure that the providers of support services cannot directly identify individual digital euro users. This shall include the pseudonymisation and clear segregation of personal data.

5. The providers of support services shall be considered to be the controllers of personal data as regards the purposes referred to in paragraph 1 of this Article, unless the European Central Bank and the national central banks were to take upon them the responsibility of controller. This paragraph is without prejudice to tThe European Central Bank and the national central banks shall not process personal data when appointing the operators of any payment-related services across PSPs payment service providers and when auditing of the service performance level of providers of support services without processing any personal data.

Questions for the Member States:

Q1. Do Member States agree with the Spanish Presidency's drafting suggestion for Article 2(28), i.e. to include the possibility for digital euro users to register additional proxy aliases in addition to a compulsory alias?

Q2. Do Member States agree with the proposed clarifications in the Regulation as regards the DEAN directory and the alias look-up?

2.3. Settlement

The ECB explained that data is shared with the ECB only where strictly necessary for the settlement component. The data segregation and pseudonymisation measures prevent the direct identification of users by the ECB. The ECB also explained that it applies the principle of data minimisation, as neither the ECB (as provider of the

infrastructure), nor any PoSS would have access to data that is not strictly necessary for the performance of their core functions. The proposed Regulation provides the ECB with a basis for processing personal data for the settlement of online digital euro payment transactions in Article 35(1)(b).

2.4. Single Access Point

The ECB explained that the SAP is a repository for digital euro user identifiers and other related data. The Regulation refers to the SAP in Article 35(8) of the original Commission proposal. The Belgian Presidency's drafting proposal suggested moving the reference to the tasks of the SAP to a new Article 16(7a) and a new Article 31(3). The aim of the SAP is to support the PSPs in enforcing the holding limits in accordance with Article 16(1) and ensuring the emergency switching upon the request of the user in accordance with Article 31(2). If a user were allowed to hold multiple accounts, then PSPs would check the holding limit allocation via the SAP. As required by Article 35(8) and explained during the technical seminar, the ECB applies measures to ensure that only the PSP providing services to the user can infer the identity of users based on information provided by the SAP. The data points used are covered in point (4) of Annex IV. Since some Member States argued that they did not see any decisive advantages in moving these provisions from Article 35(8) to Article 16(7a) and Article 31(3), and requested that these drafting proposals be revisited during a follow-up CWP meeting on the privacy and data protection model, while also taking into account a technical update from the Eurosystem, the Presidency would like to know the current position of Member States in this regard.

2.5 Fraud prevention and detection (Secure Exchange of Payment Information)

The secure exchange of payment data is an essential tool to prevent fraud and ensure the resilience of the digital euro. Under Article 32 of the proposed Regulation, the ECB may facilitate the fraud detection and prevention tasks of PSPs by establishing a general fraud detection and prevention mechanism for online digital euro transactions. The ECB has explained that the Secure Exchange of Payment Information supports fraud prevention by ensuring that the exchange of data between PSPs can be based on state of the art security measures. In the event that hackers maliciously intercept payment transactions, they cannot use the surrogate value to obtain the user's information – the surrogate value is useless to them. The component is to be operated by a PoSS to ensure that the ECB does not have access to payment data. Article 36(1)(a) of the Regulation allows the processing of personal data by PoSS for the prevention and detection of fraud and Annex V lists the personal data that can be processed by providers of support services for this task.

Questions for the Member States:

Q3. Do Member States agree with the BE Presidency's suggestion to move the references to the tasks of the SAP to Article 16(7a) and Article 31(3)?

Q4. Do Member States have any further comments on sections 2.3 – 2.5 of this note?

ANNEX: Overview of DESP components and legal basis

DESP components	Provisions in DER	Data points
DEAN directory	<p>COM proposal: Article 2(28) on user alias.</p> <p>COM proposal: Article 22(3)</p> <p>New: drafting suggestion proposed</p>	DEAN, PSP identifier
Alias lookup	<p>ES PCY drafting: Article 2(28) on user alias</p> <p>New: drafting suggestion proposed</p>	DEAN, PSP identifier, proxy alias
Settlement	COM proposal: Article 30	Annex IV (2)
Single Access Point	<p>COM proposal: Art 35(8)</p> <p>BE PCY drafting: Article 16(1) and Article 31(2)</p>	Annex IV (4)
Secure Exchange of Payment Information (part of fraud detection & prevention mechanism)	COM proposal: Article 32(1)(a)	Annex V (1)