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The Digital Euro Package: from Legal Tender to Payment Services Providers

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Filippo Zatti and Rosa Giovanna Barresi

The Digital Euro Package: from Legal Tender to Payment Services Providers

Abstract

This paper examines the proposals for regulating the digital euro, establishing a connection between its legal standing and physical euro cash, and requiring payment services providers to offer digital euro services regardless of their location. It raises questions about the fundamental implications of treating the digital euro as legal tender. However, labelling the digital euro as a legal tender raises uncertainties about its core nature and purpose. The analysis challenges the notion that the digital euro is merely a digital version of physical cash, emphasising the evolving roles of central bank digital currencies and their legal and policy ramifications. With the digitalisation of the economy in mind, it examines how the involvement of payment services providers in distributing the digital euro could impact individual and economic rights. It underscores the importance of a balanced approach in regulating the digital euro, which should consider security measures, privacy, and data protection while fostering competition. The paper aims to provide policymakers with insights into the design and regulation of the digital euro, underlining the necessity of clarifying its legal standing and reconsidering its classification as legal tender. It stresses the importance of thoroughly examining the conceptual foundations of the digital euro to ensure its successful implementation and regulation.

Keywords: Digital euro, Legal tender, Fraud detection, Interoperability, PSP

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1 The proposal regulation for the establishment of a digital euro

A report was published in October 2020, and the digital euro project was launched. Soon after, academics debated whether legislative intervention was required to establish the legal framework for the project. The debate was potentially resolved through the provisions of the digital euro package, even if the ECB Governing Council will only make decisions until the regulations have been adopted. Nevertheless, ample evidence exists to begin to analyse it *de iure condendo*.

The proposal for regulating the creation of a digital euro comprises eight key sections that deal with establishing and issuing the digital euro, its legal tender status, and distribution even

beyond the euro area. It also addresses its role as a store of value and medium of exchange, its technical specifications, privacy and data protection, and measures to prevent money laundering.

A comparison with the proposal for the legal tender status of the physical euro currency highlights the importance of recognising legal tender within the European project and ensuring its acceptance and accessibility across various distribution channels.

1.1 The legal tender 'unveiled'

The goals of the Euro area digital currency project underscore the importance of legal tender status. It is crucial to guarantee the efficiency, credibility, flexibility, inclusivity, and independence of the euro as the primary currency of the Euro area, especially considering evolving technological developments. Although legal tender is also a feature adopted by already active CBDCs, which in any case concern so far smaller economies, and thus is not a peculiarity of the euro area, there is one aspect that is nevertheless distinctive with it. In those cases, the introduction of CBDCs has been made possible by amending existing central bank laws or introducing specific regulations or guidelines under the authority of these laws. In contrast, the proposed digital euro would be introduced through a dedicated EU Regulation (the above-mentioned 'Regulation on the establishment of the digital euro', hereafter referred to as REDE), establishing a comprehensive legal framework for the digital euro at the EU level. This reflects the unique nature of the digital euro as a CBDC that would span multiple countries and operate within the EU's complex legal and institutional setup. The proposed Regulation is based on Article 133 TFEU, which allows for measures necessary to use the euro as the single currency. This legal basis underscores the digital euro's importance for the functioning of the economic and monetary union and the euro's status as the single currency of the Euro area. However, it also comes with Article 128(1) TFEU and Articles 10 and 11 of Council Regulation (EC) No 974/98 regarding the legal tender status of euro banknotes and coins. Although it extends beyond the legal tender status by defining the legal requirements for a currency to be legal tender within the European Union, the qualification of legal tender introduced in draft² echoes what the Court of Justice has ruled when referring to cash.³ It states this status brings with it (i) mandatory acceptance, (ii) at full face value and (iii) with the effect of discharging payment obligations, as set out by Point 1 of the 2010 Commission Recommendation.⁴ However, the proposed regulation on the legal tender of euro banknotes and coins outlines exceptions to the principle of mandatory acceptance. Introducing exceptions to the mandatory acceptance of legal tender could conflict with the idea of universally accepted means of payment in settling debts. Additionally, overly broad or widespread application of exceptions could erode the legal tender status of euro cash. If too many transactions or situations are exempt from the obligation to accept cash, the practical significance of cash as legal tender would be diminished.

On the other hand, the inclusion of exceptions could be interpreted as a pragmatic recognition that, in certain situations, insisting on accepting cash may be impractical, inefficient, or even contrary to other vital interests. The exceptions could be viewed as necessary flexibility and adaptation of the legal framework to the realities of modern payment systems and societal needs. However, if the exceptions are too broad or invoked too frequently, they could undermine the legal tender concept.

It is also worth noting that the tension between the principle of legal tender and the need for certain exceptions is not unique to this proposed Regulation. Many countries with legal tender laws also provide for certain exceptions. The EU proposal for the digital version of the physical

euro includes restating the legal tender status for the digital euro, with exceptions outlined in Articles 9 to 11 of this proposal regulation, tailored to the unique features of the digital currency. The digital nature of money offers easier transfers than physically transporting cash while overcoming limitations imposed by regulations on individual and professional transport activities. Article 8 outlines the digital euro's scope of application as legal tender within a specific geographical area. This is especially pertinent to the role of payment services providers in the realm of digital euros, which the proposal extensively covers, as described in the following sections. This includes Articles 13 and 14, as well as 18 to 21 and 25 to 33 of the proposed regulation for establishing the digital euro. However, the distinction between the two forms of currency emerges with Article 12, which concludes Chapter II of that proposal.

Their complementarity and coexistence hide the fact that cash does not need providers to be transferred, while the digital version does, even if it would have 'similarities with transactions in cash — and should be treated similarly in terms of privacy' in its offline version — and acts 'as an instrument whose liquidity is similar to that of cash but without the portability limitations implicit in cash' in its online version. Naturally, digital currency shares many common features with physical cash and the various forms of payment that cash can be converted into. However, when it comes to digital currency issued by a central bank, there is a notable difference in that it does not have the potential to be transformed into physical cash. While both forms of currency are considered legal tender, they serve different purposes: physical cash is used for transactions in the physical world. In contrast, digital currency is designed for transactions within the network economy. The Regulation proposal seeks to introduce the digital euro as a supplement to, rather than a substitute for, physical euro cash. This aims to ensure that the digital euro is smoothly integrated into the current Eurosystem while maintaining the importance and usefulness of

physical cash. Additionally, by decoupling the mandatory acceptance of the digital euro from the acceptance of physical cash, the Regulation guarantees that the digital euro can effectively operate as a standalone payment method, especially in light of the growing digitalisation of the economy.

1.2 The digital euro as a (public digital) means of payment and a medium of exchange

The concept of 'means of payment' refers to both euro as cash and digital currency, but it
is not explicitly defined in the two proposals. However, its meaning can be inferred from the

In the proposed Regulation on the legal tender of euro banknotes and coins, 'means of payment' appears to refer to physical euro cash as a method for settling monetary debts.⁷

context and provisions of these Regulation proposals.

Instead, the proposed Regulation on establishing the digital euro expands the term 'means of payment' to have a broader meaning, encompassing both the digital euro and other forms of payment. For instance, Article 1 states the Regulation establishes the digital euro 'with a view to adapting the euro to technological changes and ensure its use as a single currency.' This suggests the digital euro is intended to function as a payment mechanism in the context of the economy's digitalisation.

The Regulation includes several provisions that specifically mention the digital euro in the context of payments. For instance, Article 4 specifies that the digital euro will be issued 'for the purpose of retail payments.' Additionally, Article 7 defines the legal tender status of the digital euro in terms of its mandatory payment acceptance. In contrast, Article 15 outlines principles for ensuring the effective use of the digital euro as a 'legal tender means of payment.' At the same time, the Regulation proposal also refers to other means of payment. For example, Article 9 provides exceptions to the obligation to accept the digital euro, including where the payee accepts 'comparable digital means of payment,' defined in Article 2(25) as including 'debit card payment

and instant payment at the point of interaction.'

Furthermore, Article 12, mentioned earlier, refers to the choice between digital euro and euro banknotes and coins as alternative payment methods. So, while the term 'means of payment' is not explicitly defined, it appears in the proposed Regulation on the digital euro to refer to any instrument or method that can be used to pay or settle a monetary debt, including the digital euro, physical euro cash, and other digital payment methods.⁸

This broad understanding of 'means of payment' reflects the Regulation's aim to integrate the digital euro into the existing payment ecosystem while acknowledging the diversity of payment methods in the modern economy.

The European Central Bank (then ECB) has primarily used the concept of means of payment in the economic context as a medium of exchange. This approach allows differentiation between monetary and financial instruments as defined by law and helps bridge the gap between money as currency and means of payment as currency. However, even from an economic perspective, a medium of exchange can be defined differently from a means of payment. The medium of exchange stands for 'what' (is paid), and the means of payment concerns 'how' (to deliver it). According to this principle, currency, checkable deposits, and stored-value cards are money; checks, debit/credit cards, or money orders are not money. Technological innovation can bring the two concepts closer and closer together. This is why it is questionable, if not a simplification, to state that a digital euro is solely a means of payment. As the digital counterpart to the euro, it must serve as a medium of exchange. Depending on the chosen approach for implementing a digital euro, it has the potential to function both as a means of payment and a medium of exchange. This could entail enhancing existing payment systems or ushering in a more revolutionary evolution of the concept of currency.

In this regard, it is crucial to carefully examine the role the draft regulation assigns payment services providers in distributing the digital euro.

2 The digital euro proposal and the PSPs

The Digital Euro Package is formed apart from the proposal on the legal tender of banknotes and coins and the establishment of the digital euro, which also provides payment services in digital euros.¹²

The European Parliament and the Council have the authority to create the digital euro, while the ECB is entitled to issue it, as outlined in the Treaties. Article 133 of the TFEU establishes the groundwork for legislating on Euro area Member States, thus constraining the Commission's ability to fully control the adoption and usage of the digital euro by non-Euro area Member States. The provisions outlined in Chapter VI of the digital euro proposal empower the ECB to engage in agreements with non-Euro area Member States to outline the conditions and procedures for utilising the digital euro. For the digital euro to be used in a third country, any arrangement between the ECB and a non-euro area national central bank requires a prior international agreement between the European Union and the respective third country. The ECB has made a notable move towards the digital euro, starting a 'preparation phase' on November 1st, 2023, scheduled to continue for two years. It aims to establish the groundwork for a potential digital euro, including finalising a rulebook¹³ and choosing providers to build the platform and infrastructure. This preparatory period will set the stage for possible future decisions regarding issuing a digital euro. Legislation and design of the digital euro are progressing simultaneously, with Payment Services Providers (PSPs) responsible for its distribution. Supervised

intermediaries, such as banks, will serve as the primary interface for individuals, merchants, and businesses regarding all matters related to the digital euro. They will handle all end-user services, while the central bank will be responsible for them. 14 The proposed regulation on the digital euro refers to the PSPs, as defined in the Second Payment Services Directive (PSD2), which regulates payment services offered by PSPs and the rights and obligations of the parties of a payment transaction. 15 PSD2 was issued in response to the increasing risks associated with the rise in transaction volumes due to the widespread use of online and mobile payments, which require a modification of the regulatory framework of the previous legislation to suit new digital payment services. The goal is to balance innovation, security, and competitiveness, promoting uniformity of rules across all Member States to protect consumer information and data security ('level playing field'). PSD2 enriches the profile of traditional PSPs, such as credit institutions, electronic money institutions (EMIs), payment institutions (PIs), and post offices, with the introduction of new entities called Third-party Payment services providers (TPPs). 16

Despite PSD2 representing a significant step in the regulation of payment services, reducing fraud cases, enhancing security, and pushing towards open banking, the Directive has some criticisms regarding the complexity of authentication procedures, the costs of implementing new security measures, the difficult interoperability between the technical protocols used by TPPs and different banking platforms, and the lack of uniformity in technical standards. The effectiveness of PSD2 in creating a level playing field faces constraints, mainly due to the ongoing imbalance between traditional banks and non-bank PSPs, which stems from the latter's limited access to essential payment systems.

When the proposal for a digital euro was published, the issue was whether PSD2 was a sufficient legal framework to regulate the new role of PSPs distributing digital euro or whether it

needed to be modified. The specific reference of the digital euro proposal to PSD2 characterises it as a reference framework. PSPs already authorised in the EU under PSD2 are not required to seek additional authorisation from their competent authorities to offer digital euro payment services. To distribute the digital euro, PSPs must establish contractual agreements with users who will not have a contractual relationship with the ECB.¹⁷

On the other hand, even though the Eurosystem recognised that PSPs could act under PSD2, it is evident that the evolution of PSPs' functions within the distribution of digital euros requires more specific regulations. For example, Crypto Asset Service Providers (CASP) regulated under MiCA regulation should also be permitted to distribute the digital euro. ¹⁸ The Commission proposed amendments to PSD2 by introducing changes to the current regulatory framework through two separate legislative acts: the proposed Third Payment Services Directive (PSD3), which mainly includes rules concerning the authorisation and supervision of EU Member States payment institutions, and the proposed Payment Services Regulation (PSR), which contains rules for payment services providers, whether they offer payment services or electronic money services in the European Economic Area (EEA). ¹⁹

Security is one of the main objectives of PSD2, especially regarding unauthorised intrusions into payment accounts related to the theft of money and personal data. However, the measures implemented under PSD2 do not adequately tackle emerging forms of fraud. On February 14, 2024, members of the European Parliament for Economic and Monetary Affairs voted for a more open and competitive payment services sector in the EU, with increased measures to combat and mitigate fraud in payments and data breaches, strengthened consumer rights, ensured equal access to payment systems for both banking and non-banking entities, broader adoption of the concept of open banking, improved availability of cash, especially in

remote or rural areas, and harmonisation in the application of regulations.²⁰

On 23 April 2024, Members of the European Parliament adopted the amended drafts of PSD3 and PSR, improving measures against fraud and increasing access to cash within payment services.²¹ These rules would encompass all types of PSPs, including banks, postal giro institutions, and payment institutions. The proposed regulations aim to address security, liability, and data protection. Uniform conditions would govern the provision of payment services across the EU, including electronic money services. 22 To protect transfers, it has been proposed that the unique identifier (a combination of letters, numbers, or symbols designated by a PSP or user that does not have to be the IBAN)²³ undergoes free verification, with PSPs ensuring Strong Customer Authentication (SCA).²⁴ PSPs who fail to implement adequate fraud prevention mechanisms would be liable for compensating customers for losses incurred due to fraud.²⁵ Customers will have the right to reimbursement from PSPs for losses caused by fraud if they have not implemented adequate anti-fraud measures, as well as from Electronic Communications Service Providers²⁶ in the event of malfunction. Reimbursement is also provided in spoofing cases, where scammers impersonate the customer's bank or other organisations.²⁷ Online platforms (like Meta or Google) are held accountable for failure to remove fraudulent content on their platforms.²⁸ Customers must provide consent for processing their personal data, and they should have the option to opt out of data sharing or revoke access to their data.²⁹ Also, to ensure better access to cash in remote or rural areas, it has been proposed that businesses offering cash withdrawal services without requiring a purchase (up to 100 euros) should be exempt from the rules. Similarly, automatic teller machines (ATMs) should be subject to less stringent registration procedures. In this regard, the risk of financial desertification due to the closure of bank branches and associated ATMs should be considered.

New players should be able to join the EU's payment services market, particularly in internet payments, provided they obtain authorisation. This would enable customers to make online purchases without relying on credit cards. While similar services like Sofort, iDeal, or Trustly are available in certain member states, the providers have not been regulated at the EU level.

The PSD3 could be a launching pad for the Digital euro, considering that TIPS (TARGET Instant Payments Service managed by the Eurosystem) lacks an anti-fraud, anti-money laundering, and sanctions system.

3 The new role of PSPs in distributing the digital euro

The ECB's Governing Council will consider a decision regarding the issue of a digital euro once the legislation has been officially adopted. As previously mentioned, during the preparatory phase, the Eurosystem will develop the rulebook for the digital euro scheme and establish criteria for selecting potential service providers. PSPs will be on the front-end, exclusively leading the distribution of the digital euro, establishing public-private cooperation, maintaining customer relations, and benefiting from digital euro open standards. The foundation of the digital euro infrastructure will depend on standardised payment protocols, enabling private service providers to extend their offerings throughout Europe and reducing their dependence on non-European PSPs. The ECB aims to establish a framework for uniform digital euro payments across the euro area through collaboration between public and private sector experts in crafting the digital euro rulebook. Digital euro users will exclusively enter contractual relationships with PSPs, not with the ECB or national central banks. ³⁰ Supervised intermediaries would have a contractual account

management relationship with end users and be the direct contacts for individuals, merchants, and businesses using the digital euro. PSPs will assume responsibility for distributing the digital euro to end-users, empowering them to enhance features and introduce pioneering services to their clientele. This approach ensures the Eurosystem maintains the pivotal position of intermediaries within the established two-tier financial system.

Specifically, the regulation proposal for the establishment of a digital euro rules distribution within the euro area (Art. 13,14), outside the euro area, cross-currency payments (Artt.18-21), and modalities of distributions (Art. 25-33). A draft report on the digital euro amended the proposal provisions on 9 February 2024,³¹ but there is no planned vote on this draft before the conclusion of the current legislative term.³²

PSPs are permitted to offer their services to residents (natural or legal persons) of the euro area, natural and legal persons who formerly resided or were established in the euro area and opened a digital euro account at that time, visitors (natural persons travelling to and staying in the euro area, including for tourism, business, or education and training purposes), enabling them to hold and conduct transactions in the digital euro.³³ Residents can select their digital euro service provider, which could include a PSP already associated with their commercial bank account.

Individuals residing in non-euro area countries may gain access to digital euro services following the initial launch of the currency. However, the availability of digital euro in non-euro area countries would always depend on agreements reached with the authorities of those countries.

Businesses operating within the Euro area can accept payments in digital euros. Additionally, businesses located in the European Economic Area (EEA)³⁴ and those in third countries³⁵, offering services to Euro area residents in euros, can accept digital euro payments through an acquiring provider within the Euro area. PSPs authorised outside the Euro area can provide these

services through either establishment or the provision of services free of charge.

The proposed regulation for the digital euro aims to maintain the free movement of payment services within the EU by regulating the provision of digital euro services by PSPs located in non-euro area Member States.³⁶ Its goal is to establish uniform requirements and supervisory standards for PSPs throughout the EU, regardless of their location, to preserve financial stability and promote fair competition.

Only banks offering basic payment services, not all PSPs,³⁷ must provide all basic digital euro payment services upon request from individual clients residing or established in the euro area.³⁸ PSPs, other than banks that offer basic payment services, may provide basic digital euro payment services. In contrast, all PSPs may provide additional digital euro payment services as conditional digital euro payments.³⁹

Annex I and II of the Proposal regulation establish additional and basic digital euro payment services. The latter deals with basic services for a natural person, such as access, liquidity, and transaction management.⁴⁰

Access management encloses onboarding and offboarding digital euro end users, payment instrument management, linking digital euro holdings to a commercial bank account, and lifecycle management procedures that empower end users to interact with their digital euro account through a PSP. It encompasses the ability to digital euro portability and account information service. PSPs would be accountable for authenticating end users for all these procedures.

Supervised intermediaries would undertake all user-facing duties, including digital euro accounts/wallets,⁴¹ and associated payment transactions. They will perform Know Your Customer (KYC) and Anti Money Laundering (AML) verifications, oversee the user credentials (Digital Euro Account Number — DEAN),⁴² and a user application for digital euro payments. Users can

access digital euro services through their PSP's proprietary app and online platform or a digital euro app supplied by the Eurosystem.

The digital euro will provide features for both online and offline use, ⁴³ considering instances of restricted connectivity. Digital euro transactions, whether conducted online or offline, will be settled instantaneously. ⁴⁴ In offline digital euro transactions, only the payer and the payee will have access to payment information, ensuring utmost privacy. Additionally, individuals lacking access to bank accounts or digital devices could still use the digital euro, such as a card issued by a public institution. In fact, alongside payment services providers, designated public entities would serve as intermediaries for individuals lacking a bank account. ⁴⁵

End users could terminate their contractual agreement for the digital euro with their PSPs at any time (offboarding).⁴⁶ PSPs must defund digital euro holdings,⁴⁷ deactivate the user's data, and return the funds linked with a DEAN/wallet to a commercial bank account chosen by the end user.

Liquidity management includes funding, defunding, waterfall and reverse waterfall. The amount of digital euros that end users could possess would be capped to prevent an excessive outflow of bank deposits. Nevertheless, they could still make purchases exceeding this limit by linking their digital euro wallet to their commercial bank account. Even if receiving a payment pushes the digital euro balance beyond the holding limit (threshold),⁴⁸ users would always accept it. The surplus amount would then be automatically transferred to the linked commercial bank account (waterfall).

Users could also establish a threshold for this automatic transfer that is lower than the holding limit.⁴⁹ The digital euro shall not bear interest.⁵⁰

Waterfalls integrate funding/defunding and payment processing into one operation,

minimising or eliminating user delays. Users are not required to pre-fund a digital euro account before making payments. In case of insufficient funds in the digital euro account, any shortfall could be promptly transferred from the associated commercial bank account (reverse waterfall). Individuals can use the waterfall, reverse waterfall, or both functions according to their preference. Funding options include either a commercial bank account or cash. Without a linked commercial bank account, or if waterfalls are not activated, users would be tasked with maintaining the digital euro account balance below the holding limit. This increases the necessity for manual funding and defunding of the account and increases the likelihood of transaction failures.⁵¹

Transaction management refers to the services PSPs provide to end users regarding the administration and processing of transactions. It encompasses initiating payments, verifying user identity, notifying users of confirmation or rejection, processing refunds, managing recurring payments, handling disputes, pay-per-use enabled via pre-authorisation service, payment initiation service, and optional services.

Digital euro transactions involve devices and interfaces like physical cards, mobile phones, or wearable gadgets. These devices support diverse data exchange technologies, including chips, near-field communication (NFC), quick response (QR) codes, or potentially an alias. These transactions cater to various prioritised use cases, including person-to-person (P2P) payments, which are accessible both online and offline; e-commerce payments, encompassing government-to-consumer (G2X), consumer-to-government (X2G), as well as consecutive and recurring transactions, available exclusively online; and point-of-sale (POS) payments, covering government-to-consumer (G2X), consumer-to-government (X2G), and available both online and offline.⁵²

The digital euro compensation model is designed to encourage PSPs to distribute the digital euro and ensure that private individuals can use these payments for free. Additionally, it aims to incentivise PSPs to distribute the digital euro while implementing measures to prevent merchants from facing excessive service charges. PSPs will not receive compensation for providing these essential services to private users. However, PSPs can increase fees for managing traditional bank accounts, as payments in digital euros will be an extension of these accounts. Merchants will be charged for these services, with a maximum fee established to encourage competition among PSPs. The ECB will determine the maximum fee, considering operational expenses and including a reasonable profit margin. However, fees should not exceed those associated with similar private digital payment methods to promote the effective use of the digital euro. The ECB should ensure that fees do not exceed the lower amount between the relevant cost of PSPs, which would cover a reasonable profit, and the charges for comparable means of payments. The ECB would also bear its own costs, and no fees are foreseen for funding / defunding operations.

The proposal grants the portability of the account from one PSP to another. End users can transfer their digital euro payment account to different PSPs while retaining the same account number. To initiate the transfer, the end user must request the new PSP to facilitate the account transfer. The new PSP can access the necessary data directly from the previous PSP. Additional KYC information would only be required if the end-user does not already have an existing business relationship with the new PSP.⁵⁷

Potential services that PSPs could offer in the context of the digital euro are delivery vs. payment, automatic reimbursement of subsidies, automatised repayment for BNPL (buy now pay later) schemes, conditional payments per type of payer and underlying goods/services, pocket

money for children, split payments (multiple payers).⁵⁸

Non-bank PSPs, such as fintech companies and payment processors, will be able to integrate digital euro transactions into their offerings seamlessly. This integration has the potential to attract a more comprehensive user demographic throughout the euro area and enable economies of scale. Moreover, the interoperability of the digital Eurosystem could stimulate collaboration between banks and non-bank PSPs, foster new business partnerships, and drive innovation in the payment industry. As a result, this could improve the efficiency of payment systems, lower costs, and catalyse additional innovation.

4 The dispute on the fraud detection and prevention

mechanism

In a digital payment transaction, information is shared between the device used by the payer to initiate the payment and the device used by the payee to accept it. To ensure that this data remains safe from unauthorised access and fraudulent activities by third parties, these exchanges must adhere to the most stringent security measures, integrating strong encryption. Therefore, securing the cyber resilience of a prospective digital euro scheme is a primary concern for the Eurosystem.

Grasping the diverse tactics employed by fraudsters and devising prompt and efficient strategies to thwart them remains a persistent challenge for PSPs. As demands increase on PSPs to deliver more efficient and advanced fraud detection and prevention solutions, ensuring fair competition by fostering comprehensive collaboration among PSPs is imperative. Considering the potential issuance of the digital euro, it becomes crucial to guarantee exceptional secure channels

for the exchange of payment-related information, including the digital euro account/wallet number.⁵⁹

PSPs are responsible for compliance checks and improving anti-fraud measures. The Eurosystem is exploring the potential of establishing a central support service for detecting and preventing fraud, which could help intermediaries manage fraudulent activities. The general Fraud Detection and Prevention Mechanism (FDPM) might encompass activities like fraud monitoring, risk assessment of transactions, statistical analysis, and information coordination. This mechanism helps evaluate the risk of fraud in real-time before completing a transaction and helps PSPs detect fraud post-transaction. It would aggregate data from PSPs throughout the EU but not replace their individual fraud prevention, risk management, and detection protocols.

The ECB, EBA Clearing, and the European Data Protection Board, jointly with the European Data Protection Supervisor, are disputing the interpretation of the proposed general FDPM.

In its Opinion on the Digital Euro Proposal Regulation, the ECB welcomes the creation of a centralised FDPM. This will enable a comprehensive fraud detection and prevention system for online digital euro transactions and ensure the efficient functioning of the digital euro. ⁶² Both the ECB and national central banks may assist in the fraud detection and prevention tasks that PSPs must carry out. The ECB suggests that securing payment information is crucial to fraud detection and prevention. Securing payment details (such as digital euro account numbers) during exchanges between payment initiation and payment acceptance devices is essential for safeguarding digital euro users from fraud and cyber-attacks. This can be achieved by, for example, replacing payment information with a surrogate value, like an alternate account number (a surrogate account). ⁶³ Protecting against fraudulent activities will enhance the digital euro's

reputation as a reliable and secure payment option and help deter other illegal activities.

According to the ECB, fraud detection and prevention are essential for user protection in any payment system. People need to feel confident in the safety and security of a payment solution to adopt and continue using it. A centralised FDPM would offer higher fraud protection than a single PSP could achieve alone. The ECB believes strong fraud protection fosters trust among end users. Additionally, the infrastructure would use pseudonymised data provided by PSPs to safeguard individuals' privacy.

EBA CLEARING's interpretation contrasts with the ECB. It aims to restrict any features of the digital euro that are not already offered by existing payment methods. Consequently, it opposes granting the digital euro legal tender status and establishing any fraud prevention mechanisms managed by the ECB.⁶⁴

According to EBA CLEARING, maintaining a regulatory-level playing field for all types of digital payments in the euro is essential. Without this, the proposal risks creating more advantageous conditions for CBDC payments than other digital euro payments, such as SCT and SCT Inst., allowing the ECB to establish and possibly operate a fraud detection and prevention mechanism for the Digital Euro, giving the ECB a privileged position. Therefore, uniform fraud prevention and detection requirements should apply to all euro digital transactions to benefit the industry and consumers.

The operation of payment systems by both the public and private sectors guarantees European payments' safety, efficiency, resilience, and robustness.⁶⁵

The joint opinion of the European Data Protection Board (EDPB) and the European Data Protection Supervisor (EDPS) appears to compromise the positions of ECB and EBA CLEARING.⁶⁶ While they are not entirely opposed to the FDPM, they insist on clearly

demonstrating the necessity for such a mechanism or proposing less intrusive alternatives.

The EDPB and the EDPS recognise that implementing FDPM could enhance the prompt detection of fraud, making it more effective. However, they state that this alone does not justify the infringement of fundamental rights to privacy and data protection, as it fails to include the necessary measures to ensure that the processing aligns with the principle of proportionality. Member States must consider it when determining the severity of penalties and imposing limitations on the exercise of rights and freedoms, as recognised by the Charter of Fundamental Rights. ⁶⁷ If the need for FDPM is proven, specific safeguards, including appropriate storage limitations, should be implemented to prevent anti-fraud measures from excessively and disproportionately infringing upon individuals' fundamental rights and freedoms to privacy and personal data protection.

The EDPB and the EDPS advise implementing the most suitable Privacy-Enhancing Technologies (PETs), which provide the highest level of data protection while also addressing relevant utility and scalability requirements.⁶⁸

The digital euro regulation should balance these different approaches to the amendments proposed to the text of the FDPM.

Complementary to the interpretations mentioned earlier is the position of the European Banking Authority (EBA), which welcomes the security measures delineated in the proposals for PSD3, PSR (including the 23 April 2024 ECON report on the PSD3/PSR proposals), and the Instant Payments Regulation. These measures include verifying the payee, improved transaction monitoring, facilitating the exchange of fraud-related information among PSPs, and assigning responsibility to electronic communications service providers outside the financial sector (such as telecommunications and internet providers and social media companies) for addressing payment

fraud.⁶⁹ To help enhance the upcoming legislative framework under PSD3 and PSR, which will establish anti-fraud requirements for retail payments for many years to come, the EBA states that additional security measures are necessary beyond those outlined to address the evolving nature of fraud effectively.⁷⁰

The increased incidence of fraud in instant payments may partially be due to the PSPs' limited capacity or inability to retrieve funds in case of fraudulent transactions, given that such payments are completed in under ten seconds.⁷¹ This swift processing can heighten the appeal of instant payments to fraudsters.

For both cards and credit transfers, cross-border fraud is roughly nine times greater than domestic transactions. This is mainly due to inadequate cross-border collaboration between PSPs and other stakeholders in combating international criminal activities. Furthermore, for cross-border transactions involving non-EEA countries, the inconsistent application of SCA further exacerbates elevated levels of fraud.⁷² The EBA, in its opinion released at the end of April 2024, identifies five additional measures for consideration by the EU co-legislators and the EU Commission in the negotiation of the PSD3/PSR proposals:

(1) enhanced security requirements for PSPs that supplement the IBAN/name check and the fraud prevention measures outlined in the PSD3/PSR proposals; (2) implementation of a fraud risk management framework by PSPs in addition to the obligatory security measures; (3) revised liability rules, including clear distinctions between authorised and unauthorised transactions; (4) strengthened and standardised supervision of fraud management, utilising fraud data already collected under PSD2; (5) adequate security requirements for a unified EU-wide platform for information sharing to prevent and detect potentially fraudulent payment transactions.⁷³

The Instant Payment Regulation establishes specific sanctions screening requirements

within the SEPA Regulation.⁷⁴ In fact, in the case of instant credit transfers in euros, PSPs must follow a harmonised procedure for sanctions screening. This procedure is based on daily checks of their clients to verify if they are individuals or entities subject to targeted financial restrictive measures, thus eliminating the need for checks on each transaction.

While extended settlement periods allow more time for fraud detection and prevention procedures, instant transactions require these checks to be completed within seconds, significantly altering the PSPs' transaction processing systems. Real-time payment systems present unprecedented challenges to PSPs, making it essential to establish a pan-European network for exchanging fraud-related data and insights. Additionally, fraudulent cash-outs can occur minutes after a transfer, as funds are immediately available in the recipient's account with instant payments. To mitigate fraud risks and improve the accuracy of anti-financial crime measures, often plagued by false positives leading to unnecessary rejections, PSPs must continually enhance their internal systems. This includes 24/7 real-time monitoring to optimise fraud prevention capabilities.⁷⁵

The lack of a universal classification system creates difficulties for PSPs, complicating cross-border criminal investigations and hindering collaborative efforts to combat fraud across different industries. Standardised terminology for various types of fraud is essential for effectively exchanging fraud-related data and insights among institutions. To address these issues, in June 2024, the Euro Banking Association introduced version 5.0 of the Fraud Taxonomy, a pan-European method for categorising payment fraud to enhance the fight against payment and card fraud across Europe. Its implementation offers PSPs and intelligence-sharing initiatives the opportunity to improve cross-border intelligence and data sharing, establishing a shared vocabulary for fraud types to strengthen reporting, prevention, and detection, assisting PSPs in

creating effective fraud prevention campaigns for their customers.⁷⁷

5 Conclusions

The Digital Euro Package marks a significant advancement in the Euro area's payment system, providing opportunities for innovation and adaptation to the increasingly digital economy.

However, it also poses challenges in striking a balance among various interests.

As policymakers deliberate on the proposed regulations for the digital euro, they must thoroughly analyse legal interpretations, namely for the legal tender issues. They should also carefully consider proposed amendments and the ongoing evolution of the project. Establishing a digital euro should focus on developing a suitable technical and business model that factors in public and private interests.

The role of PSPs in distributing the digital euro is a crucial aspect of the proposed regulations. While the involvement of PSPs can encourage innovation and competition, it is essential to ensure a level playing field and maintain the security of the payment system. As the digital euro project advances, it is necessary to consider the broader implications for the European financial system. The proposed Third Payment Services Directive (PSD3) could serve as a foundation for the digital euro, addressing the current lack of anti-fraud, anti-money laundering, and sanctions systems.

The Digital Euro Package raises considerations about the future of EU integration.

However, successfully adopting a digital euro may require more integration and collaboration among Member States and a unified approach to regulation and supervision.

6 Authors' contributions

This article is structured to reflect the contributions of each author—Filippo Zatti authors Section One, which focuses on the status of digital euro legal tender. Rosa Giovanna Barresi developed the subsequent sections, covering issues involving payment services providers. The conclusions result from joint work but must be considered attributable to Zatti.

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Notes

¹The Regulations have been proposed for establishing the digital euro (Proposal for a Regulation of the European Parliament and of the Council establishing the digital euro, COM(2023) 369 final, 28 June 2023), deciding the legal tender status of euro banknotes and coins (Proposal for a Regulation of the European Parliament and of the Council on the legal tender of euro banknotes and coins, COM(2023) 364 final, 28 June 2023) and on the payment services in digital euros (Proposal for a Regulation of the European Parliament and of the Council on the provision of services in digital euros by payment services providers incorporated in Member States whose currency is not the euro and amending Regulation (EU) 2021/1230 of the European Parliament and of the Council, COM(2023) 368 final, 28 June 2023.) are still being reviewed by European lawmakers as of the current publication date. This article uses the term 'payment services providers' to maintain consistency with the meaning and form outlined in the draft regulation.

²Art. 4, Proposal for a Regulation of the European Parliament and of the Council on the legal tender of euro banknotes and coins, COM(2023) 364 final.

 $^{3}ECJ (2021)$

⁴Commission Recommendation of 22 March 2010 on the scope and effects of the legal tender of euro banknotes and coins (2010/191/EU).

⁵See Recitals (75) and (82), REDE.

⁶Recital (80), REDE.

⁷This can be seen, for example, in Art. 4, which defines the legal tender of euro banknotes and coins, and in Art. 7, which requires Member States to ensure the acceptance of cash payments.

⁸'Money refers to anything that is generally accepted as payment for goods and services or in

the settlement of debt, also called the medium of exchange' (p. 14), and a good is suitable to be used as a medium of exchange when it is acceptable, of standardised quality, durable, valuable, and divisible (p. 17). See Hubbard (2005).

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¹⁰ 2401970:31283254.

¹¹ 2401970:31283273.

¹²Proposal for a Regulation of the European Parliament and of the Council on the provision of services in digital euros by payment services providers incorporated in Member States whose currency is not the euro and amending Regulation (EU) 2021/1230 of the European Parliament and of the Council, COM(2023) 368 final, 28 June 2023.

¹³ 2401970:31283268.

¹⁴Recital (9), REDE: '(. . .) No account or other contractual relationship would be established between the digital euro user and the European Central Bank or the national central banks.

Payment services providers should manage the digital euro accounts of digital euro users on their behalf and provide them with digital euro payment services. Since payment services providers are not a party to the direct liability held by digital euro users towards the European Central Bank and the national central banks of the Member States whose currency is the euro and are acting on behalf of digital euro users, the insolvency of payment services providers would not affect digital euro users.' The European Parliament Draft of 9 February 2024 amended the Proposal and used the word 'wallets' instead of 'digital euro accounts': European 2401970:31283279. No vote has been scheduled on the Draft Report before the 2024 European elections.

¹⁵Art 2(7), REDE: 'payment service provider' means a payment service provider as defined in Article 4, point (11) and Art. 1(1) of the Directive 2015/2366 (PSD2), Directive (EU) 2015/2366

of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC namely, credit institutions, electronic money institutions, post office giro institutions, payment institutions, the ECB and national central banks when not acting as public authorities, Member States authorities when not acting as public authorities. The objective was to create legislation that reflects the evolution of new digital payment services and the Single Euro Payments Area (SEPA) project for European integration to ensure higher security standards in using electronic devices, platforms, and remote communication channels. See also the last paragraph of footnote 1 in this document.

¹⁶TPPs can access information or account balances of users with an online banking contract and grant their consent to provide the requested service. However, TPPs do not have custody or management of users' payment accounts. Depending on the types of services offered by TPPs, there are payment initiation services providers (PISPs), account information services providers (AISPs), and card-based payment services providers (CISPs). The possibility for new entities to access the payment systems market is also considered an opportunity to introduce innovative payments into the market without prior control over payment instruments, as with financial instruments, thus ensuring the principle of technological neutrality.

¹⁷Artt.13-14, Distribution, Explanatory Memorandum, REDE.

¹⁸Crypto Asset Services Providers (CASPs) regulated under the MiCA regulation, which are Account Servicing Payment services providers (ASPSPs) as per PSD2, should also be permitted to distribute the digital euro. According to PSD2, ASPSPs should be mandated to grant access to payment account data to Payment Initiation Service Providers (PISPs) and Account Information Service Providers (AISPs) via Application Programming Interfaces (APIs), enabling them to

create and offer innovative supplementary services, Recital (26) of the Proposal for a regulation on the digital euro, COM(2023) 369 final, Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (MiCAR).

¹⁹Proposal for a Directive of the European Parliament and of the Council on payment services and electronic money services in the internal market amending Directive 98/26/EC and repealing Directives 2015/2366/EU and 2009/110/EC (COM(2023) 366 final), 28 June 2023, (PSD3); Proposal for a Regulation of the European Parliament and of the Council on Payment Services in the internal market and amending Regulation (EU) No 1093/210 (COM(2013) 367 final) 28 June 2023, (PSR). The legislative package also includes a proposal to create a Financial Data Access (FIDA) framework: Proposal for a Regulation of the European Parliament and of the Council on a framework for Financial Data Access and amending Regulations (EU) No 1093/2010, (EU) No 1094/2010, (EU) No 1095/2010 and (EU) 2022/2554, COM/2023/360 final, 28 June 2023.

²⁰European Parliament (2024d).

²¹European Parliament (2024b). Parliament has concluded the initial reading of these legislative pieces. Trilogue negotiations involving the Council, the European Parliament, and the European Commission will commence after the formation of the new Parliament. ECON, MEPs want to enhance fraud protection and access to cash in payment services: European Parliament (2024c).

²²The regulatory framework, as outlined in PSD2 and EMD2, delineates different authorisations for payment services and electronic money issuance. Specifically, non-bank entities require a distinct authorisation to operate as Electronic Money Institutions (EMIs) for the latter activity. The proposed legislation consolidates e-money and payment services regulations into a

unified framework while accommodating specific nuances where necessary. Recital (29) and Art. 2(ha) of the European Parliament legislative resolution of 23 April 2024 introduce a unified licensing approach: see European Parliament (2024b). This adjustment reflects the acknowledgement that issuers of 'tokenised electronic money' should be treated on par with traditional electronic money issuers, aligning with Regulation (EU) 2023/1114 ('MiCAR', Markets in Crypto-Assets Regulation). According to MiCAR, electronic money tokens are classified as electronic money, simplifying the regulatory process and ensuring uniform application across the EU. See also 2401970:31283268, 2.

²³Recital (70), European Parliament (2024b). Under PSD2, PSPs are not required to verify the payee's name; only their unique identifier is required. Instead, Art. 1(2) of the Instant Payments Regulation, amending Regulation (EU) No 260/2012 (the SEPA Regulation), introduced Art.5c(1) that states that PSPs throughout the Single Euro Payments Area must offer the IBAN/name check (service ensuring verification) to payers by 9 October 2025, (Art.5c(9)). The Instant Payment Regulation, which took effect on 8 April 2024, allows funds to be deposited into the payee's account within ten seconds, and the instant credit transfer is available 365/24/7. The EPC established that version 1.0 of the verification of payee scheme rulebook will be published in September 2024 and entered into force on 5 October 2025: European Payments 2401970:31283263. In September 2023, EBA CLEARING began experimenting with a pan-European system for detecting fraud attempts and other anomalies (FPAD). The FPAD includes real-time tools for preventing and detecting fraud, such as IBAN/name verification, to bolster fraud prevention initiatives by PSPs throughout Europe: 2401970:31283259. On 8 April 2024, EBA CLEARING announced its plans to roll out verification of payee services at a pan-European level starting from December 2024. This initiative aims to assist PSPs in providing

IBAN/name matching services to their customers for SEPA transactions and adhering to the European Payments Council scheme: 2401970:31283266, EBA Clearing (2024a), Beginning in May 2024, supervisors in the EU can submit individuals 'identities to EuReCA, the EU's central database for combating money laundering and terrorism financing, managed by the European Banking Authority (EBA). Only information about significant breaches in AML/CFT regulations can be disclosed: European Banking Authority (2024a).

²⁴According to Article 4, No. 30 of the Directive (EU) 2015/2366 (PSD2), SCA involves two-factor authentication for online payments based on factors known only to the customer, such as knowledge, possession, or inherence. It generates a single-use authorisation code linked to payment details to prevent reuse in case of interception or compromise.

²⁵Recital (122), as amended by the European Parliament (2024b), states that Alternative Dispute Resolution procedures should be mandatory for PSPs.

²⁶Art. 3(55a), European Parliament (2024b) defines 'electronic communications service provider' as 'any provider that falls within the scope of European electronic communications code (Directive (EU) 2018/1972 and Digital Service Act, Regulation (EU) 2022/2065.'

²⁷Art. 59, European Parliament (2024b) and recitals (79), (80) and (81). Art. 2 (9a) states that Article 59(Impersonation fraud) shall also apply to Electronic Communications Service Providers and online platforms. Art. 59-5(b) states '(...) Payment, electronic communications, and digital platform service providers shall have fraud prevention and mitigation techniques to fight fraud in all its configurations, including non-authorised and authorised push payment fraud. 'Recital (79) defines social engineering fraud as 'where a fraudster manipulates a payment services user in performing a certain action, such as initiating a payment transaction or handing over the payment

service user's security credentials to the fraudsters.' Furthermore, the EBA outlines measures for PSPs, including pre-transaction monitoring and potential transaction blocking. It also defines user liability, addressing gross negligence in authorised push payment fraud. This fraud involves victims being coerced into immediate payments to fraudsters, often via social engineering tactics like impersonation. Fraud types can be a manipulation of the payer, a mixed social engineering and technical scam, and an enrolment process compromise: European Banking Authority (2024a).

²⁸Recital (81a), European Parliament (2024b): 'Online platforms can also contribute to increasing instances of fraud. Therefore, and without prejudice to their obligations under Regulation (EU) 2022/2065 of the European Parliament and the Council (Digital Services Act), they should be held liable where fraud has arisen as a direct result of fraudsters using their platform to defraud consumers if they were informed about fraudulent content on their platform that and did not remove it.'

²⁹Meta introduced the Pay or Okay model, allowing EU users to either pay a subscription and access the service ad-free or use it for free while agreeing to have their data processed for behavioural advertising, as usual. The data protection authorities in the Netherlands, Norway, and Hamburg sought the opinion of the EDPB regarding the legality of the Pay or Okay model under the EU General Data Protection Regulation. EDPB states that if the sole option is to pay with money, opting to pay with data does not equate to voluntary consent. An alternative must be available wherein users can access all features without monetary payment or data provision, as a free account without personalised advertising, wherein advertising is permitted without data processing for profiling purposes: European Data Protection Board (2024). See also the Euro Data Protection Board, which recommends that additional safeguards should be included in PSR and FIDA legislation regarding data sharing for fraud prevention to ensure data protection: European

Data Protection Board (2024a).

³⁰Art. 13(6), REDE.

³¹European Parliament (2024).

³²European Parliament (2024a).

³³Art. 13 and Art. 2(22) REDE.

³⁴EEA encompasses Iceland, Liechtenstein, Norway, and the 27 EU Member States.

³⁵ 'Third countries' refers to nations outside the euro area and the EEA that lack an agreement permitting the use of the euro.

³⁶Artt. 18-21, REDE.

³⁷Account Servicing Payment services providers (ASPSPs), under PSD2.

³⁸Recital 28 and 30, REDE.

³⁹Conditional digital euro payments like pay-per-use or payment initiation services, Recital 30, REDE.

⁴⁰Art. 14(1), Annex I and II, REDE; European Central Bank (2023a), 19 ff.; European Central Bank (2024) 2401970:31283268, 5 ff.

⁴¹The draft report substituted the wording 'digital euro accounts' of the proposal regulation on the digital euro with 'wallets': See European 2401970:31283279.

⁴² Art. 22(3) REDE; European Central Bank (2023a), 20.

⁴³Art. 23, REDE.

⁴⁴Art. 30(1), REDE.

⁴⁵Public entities are local or regional authorities or postal offices. See Explanatory

Memorandum, REDE, 3. Moreover, each Member State must appoint a specific entity to grant

access to digital euro services for individuals vulnerable to digital financial exclusion. This entity

will offer tailored assistance for onboarding and ongoing support in utilising digital euro services, all provided free of charge for eligible individuals. The draft report adds to PSPs 'other service providers,' Amendments 22 and 78: see European 2401970:31283279.

⁴⁷ 'Defunding' means exchanging digital euros with cash, Art. 2(12), while 'Funding' is the reverse process, Art. 2(11) REDE.

⁴⁸The threshold has yet to be defined, even though €3.000 per resident has been proposed: see 2401970:31283272, nt. 2.

⁵⁵Art. 17(2), REDE. 'Comparable means of payments' are debit card payment and instant payment at the point of interaction, Art. 2(25).

⁴⁶European Central Bank (2023a), 21.

⁴⁹Recital (36) and Art. 13(2), Art. 13(3), REDE.

⁵⁰Art. 16(8), REDE.

⁵¹European Central Bank (2023a), 15.

⁵² 2401970:31283268, 17.

⁵³Annex II, REDE.

⁵⁴European Central Bank (2023a, 6, 30 ff.

⁵⁶Art. 17, REDE.

⁵⁷Art. 31, REDE.

⁵⁸ 2401970:31283265. The digital euro cannot be programmable money. Still, payment transactions can be conditional so they can be 'automatically triggered by software based on predefined and agreed conditions', Recital (55), and Art. 24(2), REDE.

⁵⁹Art. 22(3), REDE.

⁶⁰Recital 68 and Art. 32, REDE. See also European Central Bank (2023b), 8.

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<sup>61</sup> Art. 32(3), REDE.
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⁶²European Central Bank (2024), §15.5.

⁶³European Central Bank (2024b).

⁶⁴EBA Clearing (2023a), 1 ff.

⁶⁵EBA Clearing (2023a), 4.

⁶⁶European Data Protection Board-European Data Protection Supervisor (2023).

⁶⁷European Data Protection Board-European Data Protection Supervisor (2023), 21.

⁶⁸European Data Protection Board-European Data Protection Supervisor (2023), 22.

⁶⁹See above §2.

⁷⁰European Banking Authority (2024), 8.

⁷¹See Regulation (EU) 2024/886 of the European Parliament and of the Council of 13 March 2024 amending Regulations (EU) No 260/2012 and (EU) 2021/1230 and Directives 98/26/EC and (EU) 2015/2366 as regards instant credit transfers in euro (IPR).

⁷²European Banking Authority (2024), 5.

⁷³European Banking Authority (2024), 8 ff.

⁷⁴Art. 1(2) of the Instant Payments Regulation, amending Regulation (EU) No 260/2012 (the SEPA Regulation) introduced Art.5d 'Screening of PSUs by PSPs that offer instant credit transfers to verify whether a PSU is a person or entity subject to targeted financial restrictive measures.'

⁷⁵European Central Bank (2021), 3.

⁷⁶Moes and Ruesing (2024), 66.

⁷⁷Euro Banking Association (2024).