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Untangling Digital Euro's Personal Data Protection Challenges: An Exploration of Data Processing Activities and Latent Privacy Risks

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Background

- Research project members:
 - Andrés Chomczyk Penedo (lead)
 - Michaël Van den Poel
 - Pablo Trigo Kramcsák
 - Alessandro Ortalda
- BPH Working Paper ‘The European Commission’s Proposal for a Digital Euro – A Preliminary Personal Data Protection and Privacy Analysis’, December 2023
- Project selected for EDPS legal and technological advisory support (April 2024)

Methodology and scope

Research question:

How does the Digital Euro Proposal address data protection and privacy issues stemming from the principles, obligations and rights in the EU data protection framework?

Methodology:

Descriptive and theoretical legal analysis of current payment solutions and the digital euro proposal through a fundamental rights lens (privacy and data protection)

The EU Digital Finance Strategy and the Digital Euro inception

2020 Commission Digital Finance Strategy: acknowledging previous work

2023 Digital Euro (legislative) Proposal by Commission

Current status: initial round of discussion in the European Parliament and the Council of the European Union

Reaction to both cryptocurrencies and stablecoins?

A truly novel public payment solution?

Resemblance and reliance on the current electronic payment system

Monetary privacy: from cash to control? (I)

Monetary privacy matters

Financial data is extremely revealing in a market-based society

It might reveal special categories of personal data, particularly through big data analytics

A necessary condition for an open society?

Monetary privacy: from cash to control? (II)

Fiat currency (cash): privacy-by-default, no monitoring of transactions

Status quo (cash and digital accounts): monitoring high-value transactions

Cash transactions up to certain amount (e.g., Belgium: 3000 EUR), more only via bank transfers

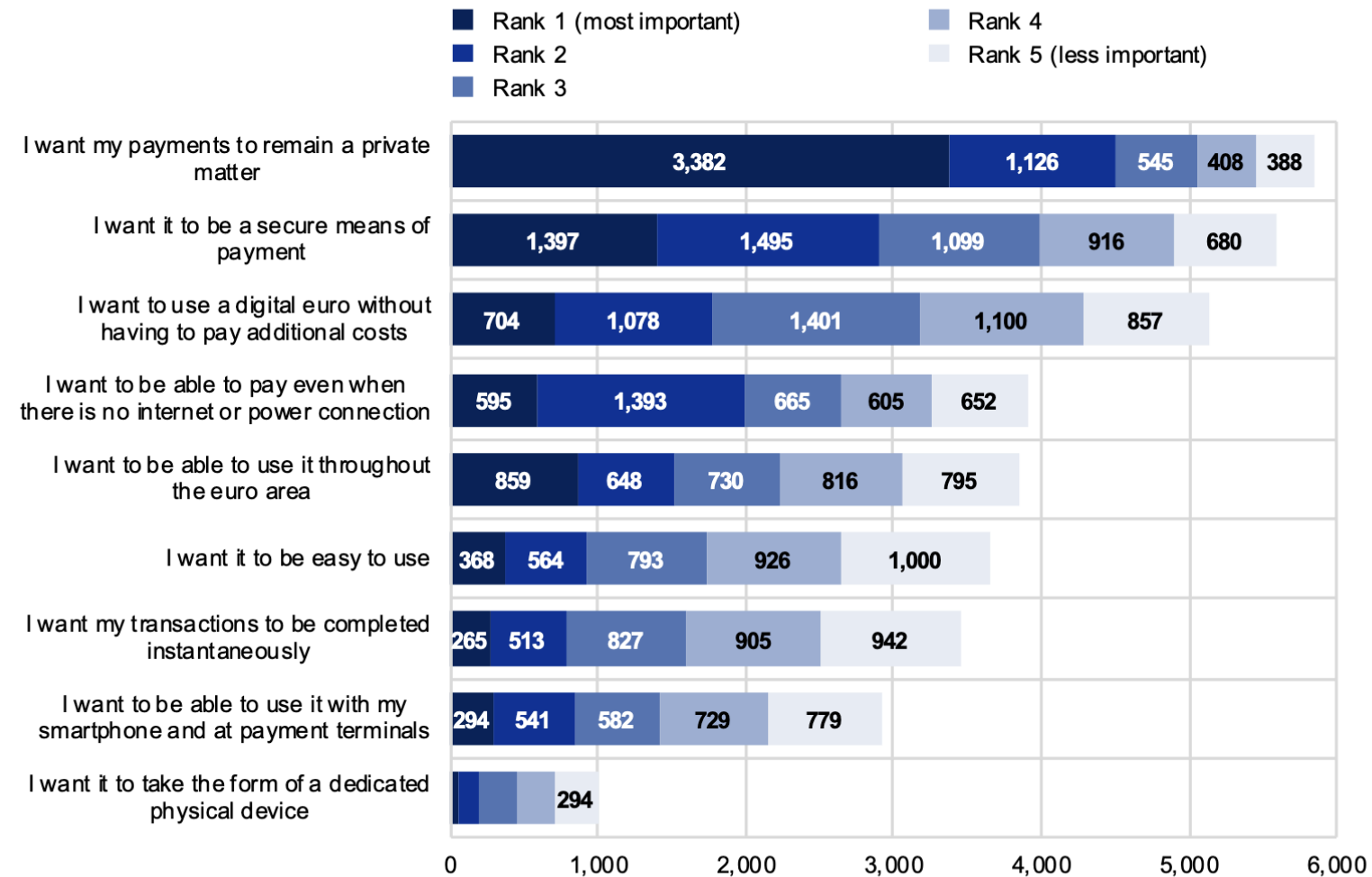
Bank transferred monitored for anti-money laundering, countering financing of terrorism, anti-fraud

Data processing on large scale for a wide range of reasons ('money is data and data is money')

The rise of cryptocurrencies as a result of a trust crisis

Chart 4

Preference for some digital euro features based on top five rankings



Note: Number of respondents not shown for the option “I want it to take the form of a dedicated physical device”: rank 1 (47), rank 2 (139), rank 3 (254), rank 4 (263).

Source: ECB, ‘Eurosysteem Report on the Public Consultation on a Digital Euro’
https://www.ecb.europa.eu/pub/pdf/other/Eurosysteem_report_on_the_public_consultation_on_a_digital_euro~539fa8cd8d.en.pdf accessed 1 December 2023

Data protection and privacy challenges for CBDCs

Each monetary and payment system has to tackle three common challenges

- Infrastructure centralization v. decentralization

- Programmable money

- Settlement of transactions

The design of the CBDC system directly addressed these issues

Risks from how these systems are designed

- Excessive, non-proportional transaction monitoring

- Misuse of financial data

- Data breaches

Loss of trust and chilling effect => risk to a right, but no individual, provable harm?



The digital euro current architecture and its consequences for data processing

The proposed structure for the digital euro introduces a complex architecture and a web of intermediaries, exposing transactions to potential analysis by third parties.

Potential interaction of the proposed digital euro with other structures and tools, such as the European Union Digital Wallet.

Whether directly or indirectly, the digital euro will process personal data. This includes personal information related to an individual who is not the primary user of the digital currency or its associated services/infrastructure, i.e. 'silent party data'.

Two key challenges that the digital euro poses for personal data protection (I)

The unclear allocation of roles and responsibilities among the various actors involved in data processing:

Scope of data processing activities that fall under the digital euro framework.

Processing of personal data by Payment Service Providers and other providers of support services: tasks and legal basis (public interest?).

Processing of Personal Data by the European Central Bank and the National Central Banks: joint controllership.

Exercising Data Subject Rights: decentralised model.

Two key challenges that the digital euro poses for personal data protection (II)

The potential tension between data minimisation, purpose limitation, and data availability.

The case of fraud detection. The Proposal does not provide for clear and precise rules governing the scope and application of the fraud detection mechanisms, which causes ambiguity regarding the roles of the different stakeholders, resulting in a lack of foreseeability.

'[...] respecting a risk-based approach that underpins the Union AML framework and by excluding full anonymity'.

Digital euro proposal and the role of EU data protection law for safeguarding fundamental rights

Taking an approach that is more aligned with data protection and privacy would constitute redrafting the Proposal.

EDPB and EDPS note in their Joint Opinion: data protection by design and by default should be embedded in the design of the digital euro from the outset.

To address this in a successful manner, the digital euro proposal needs to sincere itself with regards to what the digital euro will be for its users and their privacy expectations...

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