



EUROPEAN CENTRAL BANK

EUROSYSTEM

The digital euro project

Investigation phase
outcomes and
lessons learnt

Sibos 2023



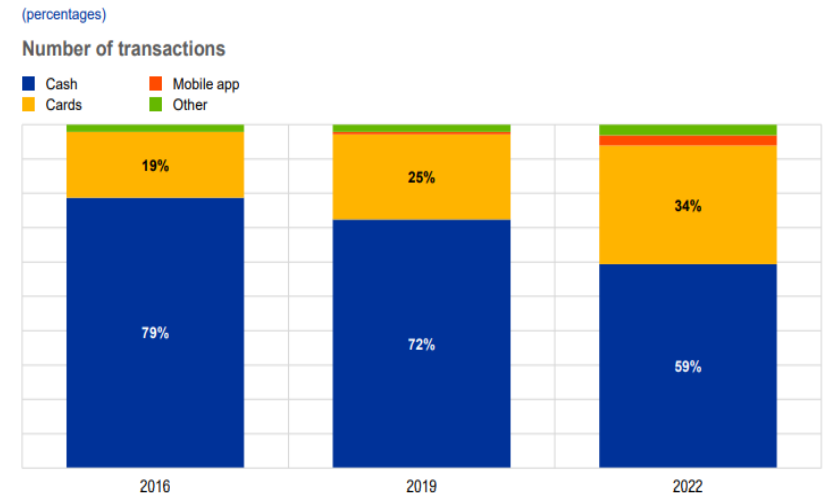
Ulrich Bindseil & Evelien Witlox

Exploring central bank digital currencies

1. In Europe **digital payments are on the rise**, but cash remains important
2. Extrapolating these trends suggests that central bank money could lose its role as providing the **monetary anchor** and being an **available option for citizens**.
 - **Payments is a network function** which easily leads to market concentration and attempts to abuse market power
 - **Efficient and resilient payments** is not just important for modern society, but a pre-condition of it

The downward trend in cash usage intensified after the pandemic*

Share of payment instruments used at the point of sale in terms of number and value of transactions, 2016-22, euro area



*See [Study on the payment attitudes of consumers in the euro area \(SPACE\) – 2022](#).

Exploring central bank digital currencies

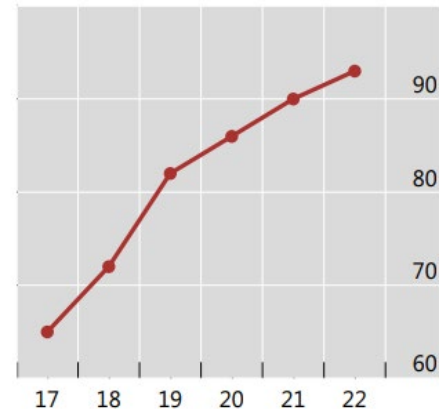


More than 90% of central banks are exploring retail central bank digital currencies (CBDCs)

More than half of central banks are developing CBDCs or running concrete experiments.

More than two thirds of central banks are considering it likely or might possibly issue a retail CBDC in the short or medium term.

Engagement in CBDC work



Source: Bank for International Settlements (2023) *Making headway – Results of the 2022 BIS survey on central bank digital currencies and crypto*, BIS Papers No 136

Financial stability and monetary policy transmission



Financial stability has been a **core consideration** of the project

“The excessive use of the digital euro as a form of investment and the associated risk of sudden large shifts from bank deposits to the digital euro should be avoided.”

([ECB Report on a digital euro, 2020](#))



The digital euro would be **designed ex-ante in a way to have no material impact** on financial stability and the transmission of monetary policy.



In this context, a central bank has **three important tools** at its disposal:

1. CBDC **design features** to reduce excessive use as a form of investment (e.g. limits to individual holdings; reverse waterfall option)
2. A distribution model based on **supervised intermediaries**
3. The possibility for the central bank to **steer liquidity conditions** if necessary

A digital euro outside the euro area

Rules for **geographical access** will be set down in legislation → design of digital euro can accommodate them

If **legislation** allows, access could be extended to consumers and merchants in the European Economic Area and selected non-EU countries, if they so wish



Use cases



Payments in digital euro outside the euro area



Cross-border payments in digital euro



Use by visitors

Digital euro interoperability with other CBDCs

Use cases



Person-to-person payments in CBDC (e.g. remittances)



E-commerce payments from an online merchant outside the euro area



Payments to a merchant outside the euro area

Possible models



Interlinking model: allows transacting without participating in each system



Single system model: single system across multiple currencies

Digital euro project: investigation phase

Digital euro investigation phase October 2021 to October 2023

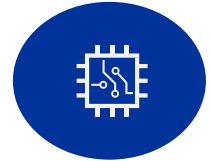
“The digital euro is **central bank money** for **retail payments** made by citizens and businesses in the **entire euro area**”



- **Complements, rather than substitutes, cash**
- Available both **online and offline**



- Ensures **high level of privacy** by default
- The ECB has no interest in seeing or storing users' private information



- The digital euro will **never be programmable money**: it will not constrain to whom, when and why people could do payments

Timeline of the investigation phase

July 2021
Governing Council decision to launch investigation phase



Q4-2021

- **Project team** onboarding
- **Governance** set-up



Q1-2022

- Prioritisation of **use cases**
- Publication of **report on focus groups with citizens and merchants**



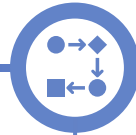
Q2-2022

- **Online/offline** availability
- Data **privacy** level
- **Transfer mechanism**



Q3-2022

- **Design options** to control take-up
- **Distribution model**



Q4-2022

- **Settlement model**
- **Amount in circulation**
- Role of **intermediaries**
- **Integration and form factor**
- **Prototype** development



Q1-2023

- **Compensation model**
- **Access** to digital euro ecosystem
- **Value added** services
- **Advanced functionalities**
- **Prototyping results**



Q2-2023

- Finalisation of **user requirements**
- Preparations for **project realisation phase**



Q3-2023

- Selection of **sourcing strategy** for project realisation phase
- Preparation of **decision-making document** with advice on potential digital euro design and implementation

Autumn 2023
ECB Governing Council decision to launch next phase

Prioritised digital euro use cases

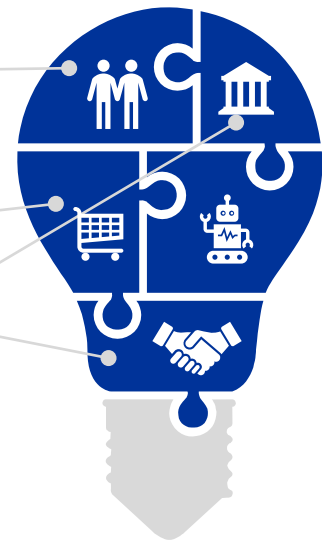


Person-to-person payments

A payment for goods or services purchased in a **physical store** (point-of-sale payment) or **online via e-commerce**



Payments to the government (X2G, e.g., taxes) and **by the government** (G2X, e.g., allowances and subsidies)



Online and offline use

Online and offline digital euro would complement each other **enabling the broadest range of features and use cases**

Online

All use cases covered



- **Remote** and proximity payments
- Third party validation
- Privacy comparable to that of existing digital payment means

Offline

Closer to cash



- **Proximity** only, **low value**, P2P and POS payments
- Holdings stored in **secure device**
- **No** third-party validation
- **Higher** privacy level, subject to appropriate legislation

Distributing the digital euro to end users



Eurosystem will issue/redeem and **settle** transfers of its own liabilities



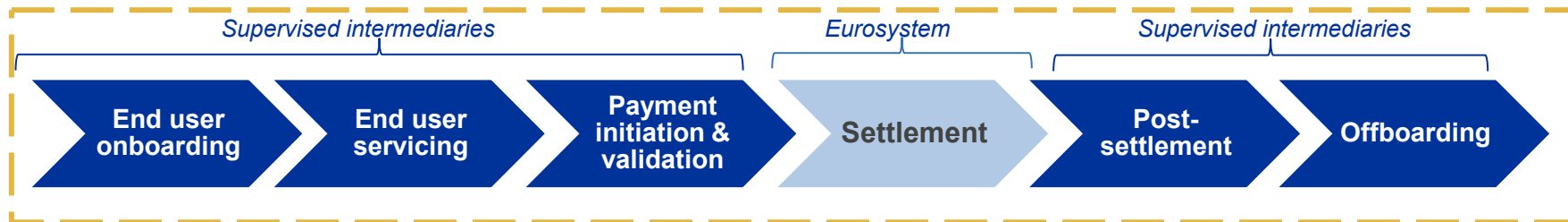
Financial intermediaries will play a key role in distributing the digital euro



The Eurosystem is considering a **payment scheme approach** → developing a common rules-based framework for participants to develop their products

- Facilitates a **homogenous end-user experience** across the euro area and interoperability via standardisation
- Best positioned to ensure **pan-euro area reach**
- Respects the **role of supervised intermediaries** and still offers room for **innovation**

Supervised intermediaries to distribute digital euro



Supervised intermediaries will play a key role in the distribution and making the digital euro as a public good **accessible to citizens** :

- **Managing interaction with digital euro end users**
- **Funding and defunding** of user's digital euro holdings
- **Initiating, processing and managing of digital euro transactions**
- Potentially offering **value added services** to improve user experience

Legislative proposal by the European Commission

“The legislative proposal is key to ensuring that the digital euro brings value to the people, taking the appreciated features of cash into the digital sphere”

Fabio Panetta
Executive Board member



The proposal makes sure that a potential digital euro has:

Legal tender status across the euro area

High degree of privacy, while minimising money laundering and terrorist financing risks

Basic services free of charge and appropriate **economic incentives for intermediaries** to distribute it

Online and offline functionalities

Holding limits maintaining a balance between bank deposits and central bank money

Future of the digital euro project



The digital euro project will evolve in parallel to the legislative process:

- The ECB's decision-making bodies will decide whether to move to the next project phase in autumn 2023 to further develop and test possible digital euro technical solutions.
- Throughout the process, the ECB will make the appropriate adjustments in the digital euro design in line with legislative deliberations.

The **decision to issue** a digital euro will only be taken once the digital euro **legislation is adopted**.

In a nutshell

**Evolution of
money**



**Make life
easier**



**Increase
resilience**





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EUROSYSTEM



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your attention!

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