

Omnisecure 2024 – Digital Euro

#PositiveImpact

Berlin, 22.01.2024

Disclaimer



IMPORTANT NOTICE

These materials have been prepared by Deutsche Bank AG or one of its subsidiaries, affiliates or branches (“DB”), solely for the benefit of the recipient (the “Recipient”) and are being provided for information purposes only, to assist the Recipient to evaluate the matter to which these materials relate. By accepting these materials, the Recipient agrees to use them only for such purpose and to be bound by the following limitations. These materials speak only as of their date, and the views expressed are subject to change based upon a number of factors, including macroeconomic and equity market conditions, investor attitude and demand and the business prospects of the Recipient (or any other person). These materials and the conclusions contained herein are necessarily based on economic, market and other conditions, as in effect on, and the information made available to DB as of, their date. These materials do not purport to contain a complete description of the Recipient (or any other person) or the market(s) in which the Recipient (or such other person) operates, nor do they provide an audited valuation of the Recipient (or such other person). The analyses contained herein are not, and do not purport to be, appraisals of the assets, stock or business of the Recipient (or any other person). These materials are incomplete without reference to, and should be considered solely in conjunction with, the oral briefing provided in relation to these materials.

Neither DB nor any of its affiliates has acted or is acting (and does not purport to act in any way) in a fiduciary capacity. Nothing herein should be construed as financial, legal, regulatory, tax, accounting, actuarial or other specialist advice. These materials are not intended to provide, and must not be taken as, investment advice nor the basis of any investment decision or other valuation and should not be considered as a recommendation by DB (or any of its affiliates) that the Recipient enter into any transaction. The Recipient must make its own independent assessment and such investigation as it deems necessary to determine its interest in participating in any transaction. No reliance should be placed upon these materials in connection with any actual mandate or transaction. Any decision as to whether or not to enter into any transaction should be taken solely by the Recipient.

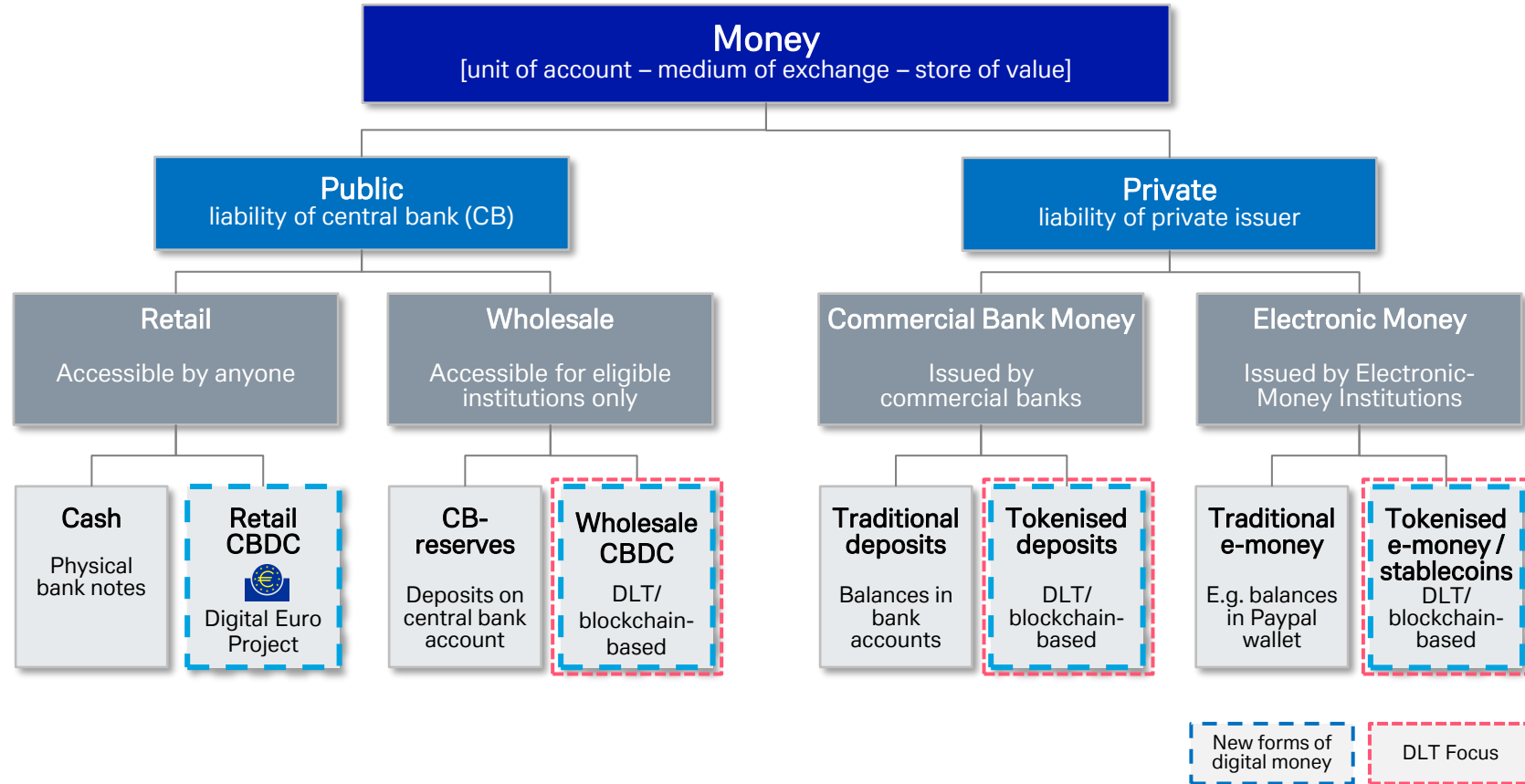
These materials have been provided on the basis that the Recipient and its representatives, directors, officers, employees and advisers keep these materials (and any other information that may be provided to the Recipient) confidential. These materials (and such other information) may not be disclosed, summarised or otherwise reproduced, distributed or referred to, in whole or in part, without the prior written consent of DB, provided, however, that the Recipient may disclose these materials on a confidential and non-reliance basis to (i) its legal advisers and (ii) as required by applicable law or regulation. The information used in preparing these materials was obtained from the Recipient or its representatives or from public sources (or has been used with the express or implied consent of the Recipient). DB and its affiliates assume no responsibility for the independent verification of any such information and have relied on it being complete and accurate in all material respects. Neither DB nor any of its affiliates makes any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness or completeness of such information, these materials (including any opinion contained therein), any of their contents or any of the results that can be derived from them. Without limiting a person’s liability for fraud, no responsibility or liability (whether in contract, tort or otherwise) is or will be accepted by DB (or any of its affiliates or any of its or their respective representatives, directors, officers, employees or advisers) as to, or in relation to, these materials, their contents, the accuracy, reliability, adequacy or completeness of the information used in preparing these materials, any of the results that can be derived from these materials or any written or oral information provided in connection therewith (including (i) in relation to the distribution or possession of these materials in any jurisdiction or (ii) for any loss or damage of any kind whatsoever arising as a result of the use or misuse of these materials), (iii) for updating or revising these materials, or (iv) for correcting (or notifying the Recipient of) any inaccuracy in these materials or their contents (or any other written or oral information provided in connection therewith) which may become apparent, and any such responsibility, liability or obligation is expressly disclaimed, except to the extent that it cannot be excluded by law. Analyses and opinions contained herein may be based on assumptions that, if altered, can change the analyses or opinions expressed. No audit of these materials has been undertaken by an independent third party.

Any statement or opinion contained herein regarding the investment case, positioning and valuation of the Recipient or any other person is not, and should not be construed as, an indication that DB will provide favourable (or any) research coverage about the Recipient or such other person or publish research containing any particular rating or price target for the securities of the Recipient or such other person. DB has adopted policies and guidelines designed to preserve the independence of any research analyst employed by DB or any of its affiliates, which prohibit any such research analyst from being compensated for his or her involvement in investment banking transactions, and which prohibit its employees (and the employees of any of its affiliates) from offering, directly or indirectly, a favourable research rating or specific price target, or offering to change a research rating or price target, as consideration for or an inducement to obtain business or other compensation.

These materials shall not be construed as a prospectus or an offer to sell, or a solicitation of an offer to buy, any security or any business or assets, nor to enter into any agreement or contract with the Recipient, DB (or any of its affiliates) or any other person. Any transaction will be made pursuant to separate documentation and in such case the information contained herein will be superseded in its entirety by such documentation in final form.

Retail d€ only one of many new forms of money

Commercial banks have to support and implement many forms on a global scale



Main Takeaways

Central Banks

- Retail CBDCs focus on retail payments in digital central bank money as a complement to physical cash
- Wholesale CBDCs focus on interbank payments using new technology for capital market use cases (distributed ledger technology /DLT)

Private Sector

- Tokenised e-money / stablecoins are based on DLT infrastructures and used for payments in crypto-asset ecosystems
- Bank deposits / commercial bank money on DLT emerge in parallel to provide innovative payment solutions
- Tokenised deposits are the banking industry response to the market demand currently only covered by stablecoins / e-money tokens

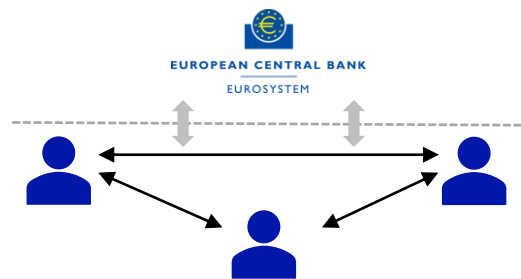
Retail vs. Wholesale CBDC

Retail demand & value prop on rCBDC yet unclear, while very strong client demand on wCBDC



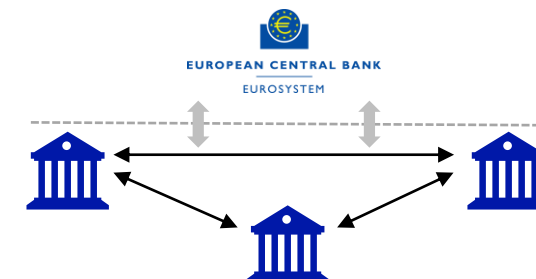
Retail Central Bank Digital Currency (rCBDC)

- **Accessible by the general public** (individuals, non-bank corporations)
- Often conceptualized with **cash-like functionalities**, for every-day transactions (peer-to-peer, e-commerce, point of sale)
- Serve as digital access to **legal tender** in light of a declining cash usage
- Different access-models are researched: directly by CB or via banks/other intermediaries. **Most central banks opt for intermediated model with banks and other PSPs providing access to the rCBDC**
- Requires **safeguards to rule out digital bank runs** – especially in times of financial distress
- **Not focusing on the use of Blockchain** but more on the provision of digital central bank money to non-banks and retail users



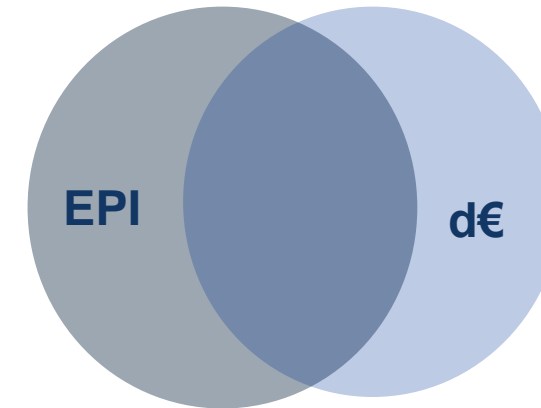
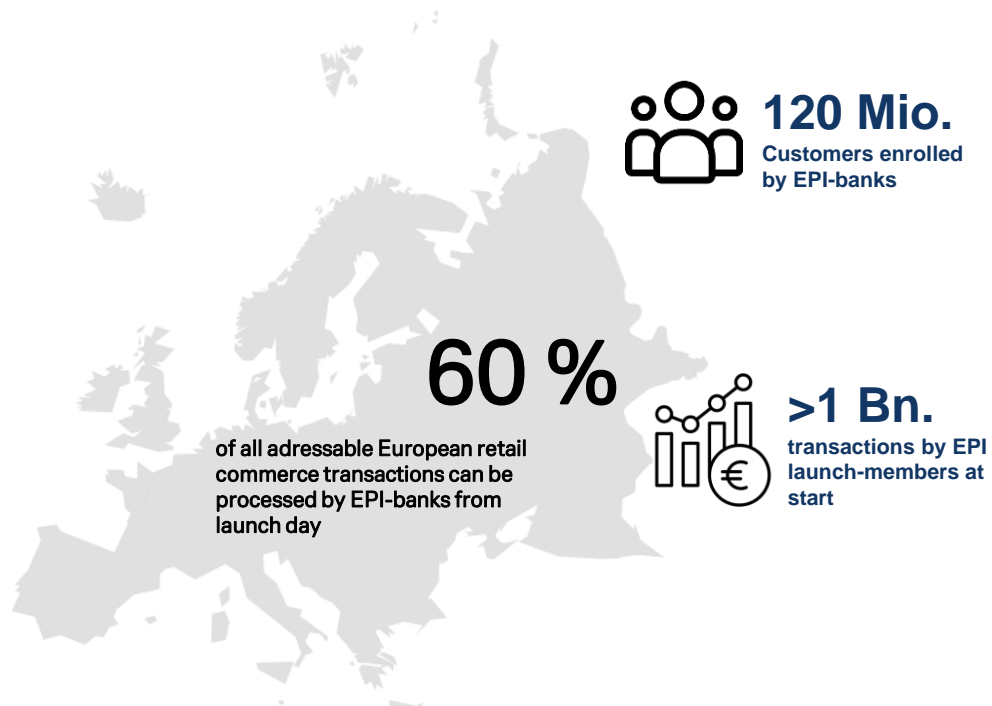
Wholesale Central Bank Digital Currency (wCBDC)

- **Accessible by financial and certain non-bank institutions only** (institutions that already have access to reserve accounts at the RTGS systems of central banks)
- **Blockchain-focus:** Providing central bank reserves on DLT or connect DLT with existing payment-systems (“Trigger-Solution”)
- Use cases: potentially **cheaper** and more **frictionless** settlement (e.g., **DvP** for tokenized securities/repo trades, **PvP** for more efficient FX and on more efficient **cross-border payments**)
- **Discussion about necessity of DLT** in wholesale payments due to existing reserve account access, existing fast payment systems, increasing opening hours and emerging DvP and PvP solutions without the use of blockchain



EPI launches this year with similar value prop like d€

Chance of EPI and retail d€ to complement each other on customer side (driven by EPI kick-start) and acceptance side (d€ legal tender)



EPI is close to the customer

- Access to 120 mio banking customers at launch
- Designed to meet the requirements of customers
- Open eco system for all European banks and acquirers to generate value added services
- Significant market share at launch due to migration of national schemes to EPI.
- Market ready already in 2024 – more member banks preparing in other states, also outside €-zone
- Proven and efficient SEPA A2A payments
- Common and scalable rule book based on existing european standards

d€ Acceptance in €-zone

- Legal tender in €-zone to provide broad acceptance
- Free usage for all citizens of member states
- Available propably by 2027/2028

Importance of a public-private partnership

Central banks recognize the role of the private sector in the digital euro project - almost all central banks would leave customer onboarding and wallet provisioning to the private sector

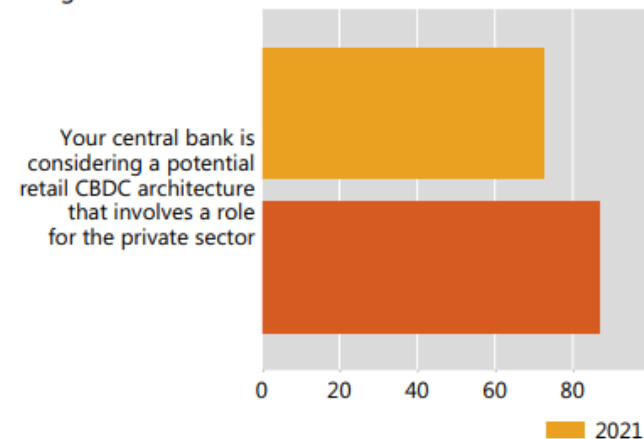


A growing number of central banks are considering a public-private partnership for a potential retail CBDC

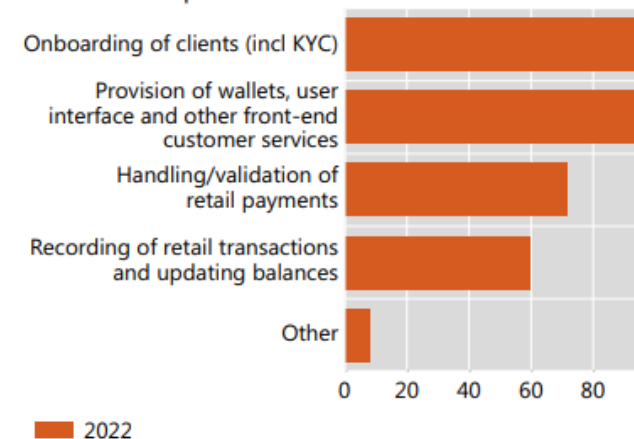
As a percentage of respondents

Graph 10

A. Agreement to statements¹



B. Role for the private sector²



¹ The panel shows the share of respondents who agreed to the statement after removing those for whom the statement was not applicable. ² The question could be answered only by central banks that are considering a potential retail CBDC architecture which involves a role for the private sector.

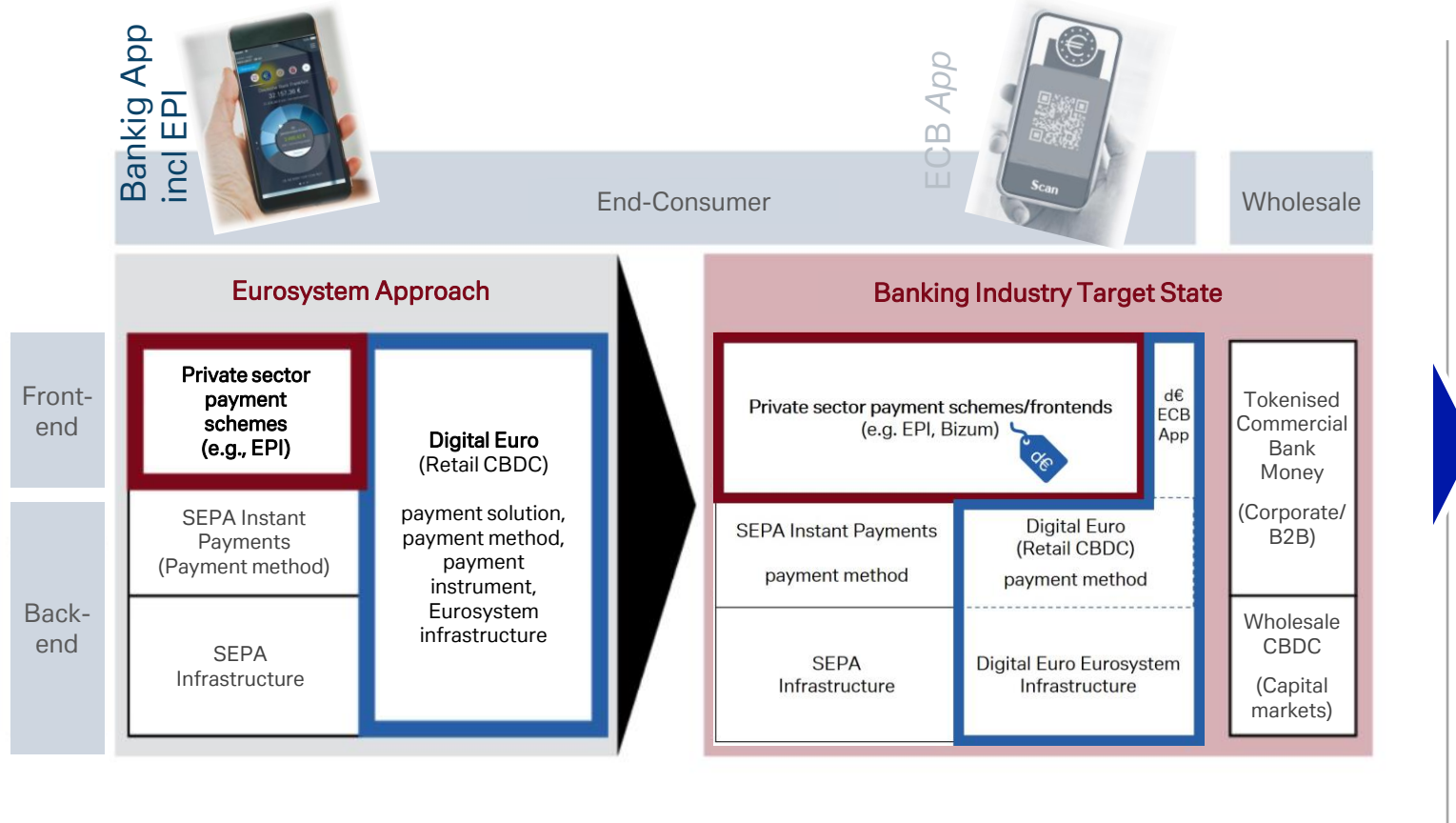
Sources: BIS central bank surveys on CBDCs and crypto, 2021–22.

Source: BIS Paper Nr. 136, Making headway – Results of the 2022 BIS survey on central bank digital currencies and crypto, July 2023

Yet, unhealthy & unneeded fragmentation of frontends



Digital Euro as a payment solution might impact private sector competition and might eat market share of existing solutions –BigTechs & card schemes benefit from end user’s frontend confusion



Key Points

- User must easily understand when and how to use individual payment methods – simplicity and transparency are fundamental for trust and adoption
- Eurosystem and private sector to further progress the long-standing partnership by defining roles & responsibilities in line with core mandates and competencies
- Efficient public-private partnership is key for competitiveness and resilience of EU retail payments and prevents isolated, parallel and redundant Eurosystem and industry investments

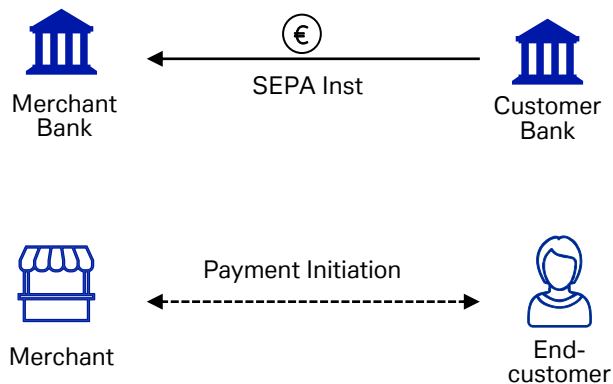
Source: German Banking Association (BdB), adapted from target picture adopted in April 2023 BdB Board Meeting

Higher technical complexity of d€ vs A2A Payments

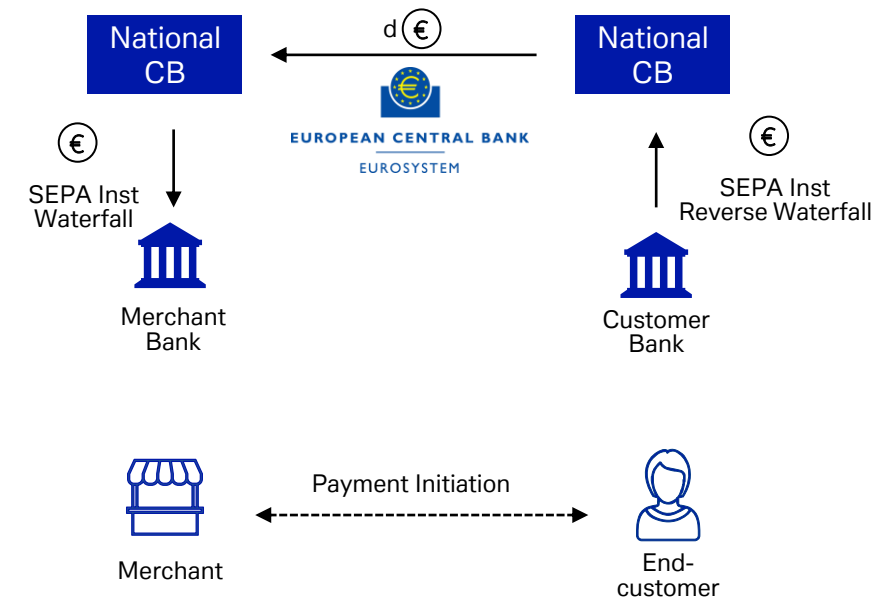
In case d€ is used as a pure payment method (i.e. like PayPal today) it will be more complex, less efficient and more prone to error vs A2A-Payments like EPI



SEPA A2A Payments (ie EPI)



SEPA Waterfall & CBDC Payment (d€)



Summary of current challenges we see with the d€

We proactively engage with all stake holders to mitigate the risks we see. Europe needs a strong and sovereign retail payment infrastructure. D€ can play an important role



	Lack of adoption	Cannibalization & Innovation	Multiple Investment & resources needed for same political objective	Disintermediation
Description	<ul style="list-style-type: none"> Missing added value, non-competitive user experience, complex/inefficient payment processing setup, etc. Banks, merchants, PSPs and Scheme providers have to invest in complete new infrastructure. 	<ul style="list-style-type: none"> Transactions via digital euros could cannibalize into existing revenues Intermediaries must invest into the new d€ infrastructure Further innovations from private sector at risk due to intervention into the market 	<ul style="list-style-type: none"> The digital Euro might become a separate payment system that is not connected or embedded into existing payment systems and service offerings To meet market demand, the ECB would need to build service offerings that the market currently provides 	<ul style="list-style-type: none"> Risk of a general weakening of the customer-bank relationship and less bank service provision to European citizens Depositors might significantly shift funds from bank accounts to digital euro wallets if no hard cap is included in the design
Mitigation	<ul style="list-style-type: none"> Focussing on providing clearly defined added values to the end user and provide scalable efficient platform for private sector to innovate on 	<ul style="list-style-type: none"> Intermediaries (banks/ PSPs) need to have a valid business model and the USP of the digital Euro should not be lower merchant fees alone 	<ul style="list-style-type: none"> It should join other market developments (e.g., EPI) and be integrated seamlessly in existing means of payments, front ends and payment solutions 	<ul style="list-style-type: none"> Strengthen the relationship between consumers and intermediaries with added values Include maximum holding-limits for consumers and merchants



Thank you for your attention