White paper

JUNE 2025

# Payment Leg On-Chain: Stablecoins, Bank Deposits and Digital Euro

Projective GROUP

# Executive Summary

Tokenization is no longer just a pilot exercise. European issuers have already placed bonds worth hundreds of millions of euros on distributed-ledger platforms, and large banks are exchanging tokenized cash across central-bank trigger rails. However, what still holds the market back is the “Cash Gap”: the asset side now settles in seconds, but the euro leg can lag for days in traditional payment systems. That delay erases many of the payment risk-management benefits that distributed ledgers promise.
This whitepaper addresses this bottleneck directly. It analyzes the three euro-based settlement options currently available for adoption:

1. **Regulated Euro-Stablecoins** – private tokens “fully” backed by liquid reserves and issued under the Markets in Crypto-Assets Regulation (MiCA).
2. **Tokenised Bank Deposits** – commercial-bank money recorded on permissioned ledgers.
3. **The Digital Euro** – the European Central Bank’s proposed central-bank digital currency.

The question is no longer if euros will travel on-chain, but how soon and through which route. In this white paper we show where each option stands, how it works, and what it costs or saves, so you have the facts and decision points in one concise read.

Let’s explore together what happens when payments finally match the speed of tokenized assets it finances.

# About Projective Group

Established in 2006, Projective Group is a leading Financial Services change specialist.

We are recognised within the industry as a complete solutions provider, partnering with clients in Financial Services to provide resolutions that are both holistic and pragmatic. We have evolved to become a trusted partner for companies that want to thrive and prosper in an ever-changing Financial Services landscape.

# 1. Current Situation: The “Cash Gap” in Tokenized Transactions

Imagine a major company issuing a bond on a blockchain and seeing the asset side settle in seconds, only to wait days for the cash payment to arrive. This is exactly what happened in 2023 when Siemens sold a €60 million digital bond on a public blockchain. The bond transfer was completed on-chain, but the payment still had to be processed via traditional bank transfer, taking two days[1]. Such examples highlight the **“cash gap”**: while assets can now be tokenized and exchanged on **D**ecentralized **L**edgers **T**echnology (**DLT**), the payment leg of the transaction often remains off-chain, relying on conventional banking systems.

This separation limits some of the key benefits of blockchain-based finance. One key advantage of DLT is the ability to conduct delivery-versus-payment (DvP) on a single platform, where tokenized assets and payments are exchanged simultaneously, eliminating settlement risk.

For instance, if a tokenized bond is delivered but payment is later sent via SEPA or SWIFT, this introduces reconciliation steps, intermediaries, and a time window of counterparty risk. Additionally, off-chain payment processes cannot be automated by smart contracts, resulting in the loss of efficiencies such as self-executing payments and instant collateral calls.

Despite these challenges, Europe has made significant strides in asset tokenization. Germany’s Electronic Securities Act (eWpG – Gesetz über elektronische Wertpapiere), which took effect in June 2021, enabled the issuance of digital bonds on DLT, and several high-profile deals have followed. A significant reform wave followed: the December 2023 Future Financing Act (ZuFinG – *Zukunftsfinanzierungsgesetz*[2]), which amended both the German Electronic Securities Act (eWpG) and the German Stock Corporation Act (AktG – *Aktiengesetz*) to allow for the issuance of electronic shares, including fully tokenized (crypto) shares. These changes, effective from January 2024, enable companies to issue shares as electronic securities, either registered in a central register or in a crypto securities register based on DLT. These born-digital shares offer lower issuance costs and support programmable corporate actions. Together, these legislative acts serve as a bridge enabling both asset classes to become trade-ready on-chain. However, for now, the cash leg of most trades still settles through traditional banking rails.

[1] Siemens begibt erstes elektronisches Wertpapier auf der Blockchain, press.siemens.com

[2] Gesetz zur Finanzierung von zukunftssichernden Investitionen (Zukunftsfinanzierungsgesetz — ZuFinG), recht.bund.de

The European Central Bank (ECB) and national central banks, like Bundesbank, Banque de France and Banca d'Italia have acknowledged this gap, running experiments to connect DLT platforms with central bank payment systems. In a 2024 pilot, Siemens settled a €300 million blockchain bond using the Bundesbank's 'Trigger' mechanism. Cash reserves were moved in TARGET2 the moment the token changed hands, reducing settlement time from T+2 to just seconds.

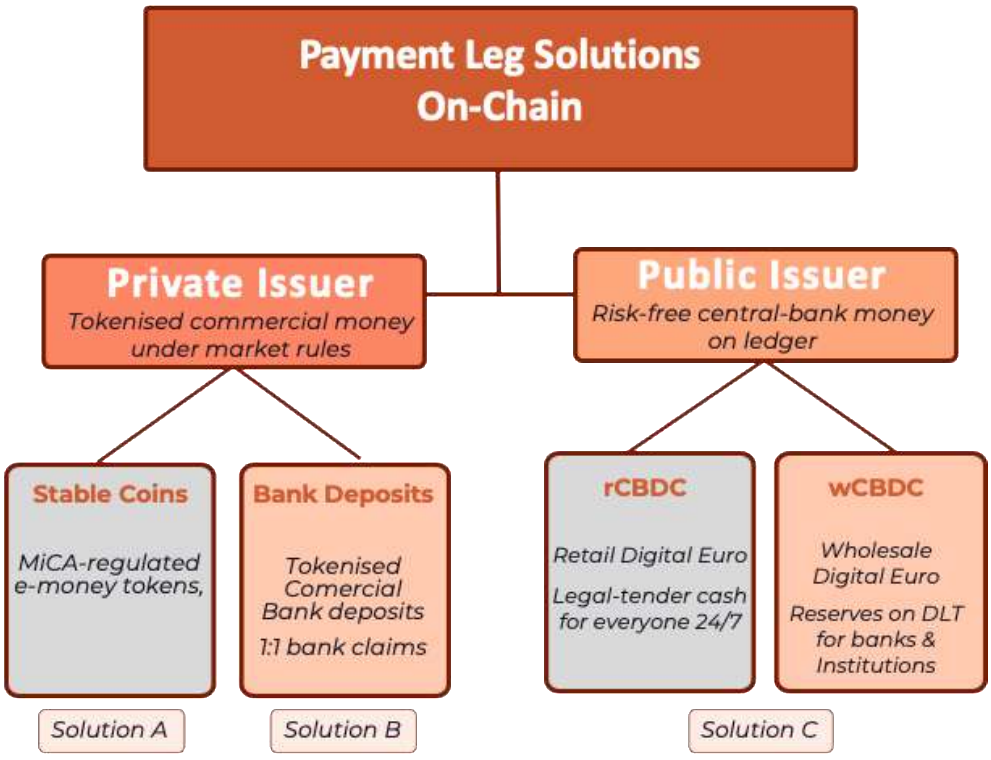
These trials demonstrate that integrating an on-chain payment leg can accelerate settlement speeds from days to seconds, reduce reliance on intermediaries, and maintain the security and transparency of blockchain for the entire transaction.

The trend in Europe is toward closing the cash gap by bringing euros on-chain so that the full promise of end-to-end digital finance can be realized: instant, secure, and automated transactions.

## 2. Possible Solutions to close the “Cash Gap”

## On-Chain Euro

To achieve an on-chain payment leg in Europe, several solutions are emerging. These alternatives include private stablecoins, bank-issued deposit tokens (Buchgeldtoken), and a potential CBDC central bank digital currency (the digital euro). Each option takes a different approach to putting Euros on blockchain, with its own mechanics, strengths and weaknesses. Choosing the right on-chain payment method will depend on the use-case and regulatory context, and many institutions are evaluating all three in parallel.



## Solution A: Euro Stablecoins (Private Issuers)

### What it is

Stablecoins are tokens pegged 1:1 to fiat currency reserves. A company (or bank) issues tokens that can be redeemed for euros held in reserve, keeping the price stable around €1. They typically live on public blockchains (Ethereum, among others.), meaning anyone with a crypto wallet can hold and transfer them

### How it works

Company issues Euro Coin tokens fully backed by euros held in bank accounts. Market participants acquire these tokens either via exchanges or through direct minting and use them for settlement on public or private blockchains. In a settlement scenario, a smart contract is configured to accept euro stablecoin payments from buyers and release tokenized assets to them, ensuring delivery-versus-payment (DvP).

### Strengths

- Borderless 24/7 payments: Not tied to any single bank's network, Euro stablecoins enable fast, low-cost cross-border payments at any time.
- Stablecoins are highly flexible and interoperable, working across different DLT networks.

### Weaknesses

- Stablecoin holders must trust that the issuer truly holds sufficient high-quality reserves, there's a credit risk and lack of transparency.
- The regulatory status of stablecoins has been complex. However, the EU's MiCA regulation, now provides clear rules for stablecoin issuance and operation, treating them as equivalent to electronic money. At the same time, it imposes strict limits: *1 million transactions or €200 million in turnover per day* for any 'significant e-money token[3].

[3] MiCA can bring clarity – but stablecoin restrictions must be revisited, *Blockworks*

### Market Actors and Developments

Stablecoins have been around for years in the crypto market, but euro-denominated stablecoins are now entering a new phase in Europe, driven by regulatory clarity and institutional adoption.

| Institution/ Issuer (Selection) | Token(s) | Market-Cap (Apr-2025)[4] | Country | Primary Use-Case |
|---|---|---|---|---|
| **Circle** | **EUROC** | **$237 m** | USA | DeFi liquidity, CEX pairs |
| **STASIS** | **EURS** | **$139 m** | Lithuania | Payments & OTC desks |
| **Anchored Coins** (established by a group of entrepreneurs) | **AEUR** | **$58 m** | Switzerland | Trading, investing, staking |
| **Société Générale-Forge** | **EURCV** | **$47 m** | France | Institutional bond settlement |
| **Monerium** | **EURe** | **$ 25 m** | Iceland | Programmable invoices, B2B, |
| **AllUnity** (backed by partner consortium, e.g. DWS) | **EUR** launch expected 2nd half of ´25 | — | Germany (BaFin e-money licence pending) | Corporate treasury, B2B Payments, Trade Finance, IoT |

***Table:*** *References: Reuters on DWS's planned euro stablecoin and market context[5]; CoinMarketCap[4]*

*(Tether confirmed in May 2025 it will withdraw USDT and EUR₮ from European venues rather than pursue MiCA compliance.)*

## Solution B: Tokenized Bank Deposits – (Buchgeldtoken)

### What it is

Tokenized Bank Deposits refer to tokenized commercial bank money. Essentially, a bank takes euros deposited in an account and creates a token representing a claim to that money. Unlike a standalone stablecoin company, a Tokenized Bank Deposits is issued by an existing licensed bank and is fully integrated with that bank's core banking system. For example, a bank could let its customers convert

[4] Coinmarketcap.com

[5] DWS launches JV for first German-regulated euro stablecoin, *reuters.com*

part of their account balance into “tokens” recorded on a DLT platform; those tokens can then be transferred peer-to-peer on that network, and the recipient who redeems the token gets credited in their bank account.

### How it works

Banks (potentially a consortium of them) create a framework to mint tokens representing customer deposits that can be transferred on a shared ledger. For example, Bank A’s customer wants to pay Bank B’s customer on-chain: Bank A “mints” an EUR-token debiting the payer’s deposit, transfers it via the network to Bank B, and Bank B “burns” the token crediting the payee’s deposit.

### Strengths

- Issued by regulated banks and falling under existing banking regulations, tokenized deposits are inherently aligned with the traditional financial legal framework.
- Deposit tokens can integrate directly with banks’ existing payment systems and liquidity infrastructure. They can be designed to remain fully fungible and redeemable for traditional deposits at any time, preserving liquidity and maintaining full backing by the issuing bank’s balance sheet.

### Weaknesses

- Due to limited interoperability across siloed networks, if Bank B does not recognize or technically support Bank A’s token, a cross-bank transfer either cannot occur on-chain or must revert to traditional payment rails. This fragmentation means liquidity is split by issuer.

Launching and operating a tokenized deposit platform is complex. It requires significant investment in technology, legal updates (e.g., revising account terms to include tokenized balances), and the development of interoperability standards across institutions.

### Market Actors and Developments

The concept of **bank-issued money tokens ("Buchgeldtoken")** has quickly progressed from theory to practice through a series of pilot projects in Europe:

| Institution | Status | Scope & Highlights |
|---|---|---|
| Deutsche Bank & UBS | Pilot - 2024 | Simulated cross-bank payment where Deutsche and UBS each minted euro deposit-tokens, then redeemed them via TARGET2 in an atomic transfer |
| UBS Digital Cash | Pilot - 2024 (multi-currency) | UBS successfully executed domestic and cross-border transactions with clients and banks in CHF, USD, EUR, and CNY, including internal liquidity transfers. |
| JPM Coin (EUR leg) | Operational (2023 for EUR) | Corporate clients use euro denominated JPM Coin for intragroup liquidity and on-chain commercial-paper settlement |
| Mastercard MTN pilot | Live sandbox 2024 | Blockchain network to support bank tokenised deposits, stablecoins and central bank digital currencies (CBDCs) |

***Table:*** *References: UBS successfully pilots blockchain-based multi-currency payment solution with UBS Digital Cash [6]; Mastercard announces Multi Token Network (MTN) to scale and secure blockchain technology[7]; Bundes Bank on Conducted trials and experiments with the Trigger Solution[8]; European Banking Authority Report on Tokenised Deposits[9].*

## Solution C: Digital Euro (Central Bank Digital Currency)

### What it is

The digital euro would be a form of central bank digital currency (CBDC) issued by the European Central Bank (ECB), effectively a euro in electronic token form, directly backed by the ECB. Unlike stablecoins or bank tokens (private liabilities), the digital euro is a public liability – a direct claim on the central bank, just like physical euro cash or central bank reserves.

### How it works

In practice, people and businesses would have digital euro wallets (likely provided through commercial banks or supervised intermediaries) and could send digital euros peer-to-peer, much as they exchange cash. The current design discussions suggest the digital euro would be broadly accessible, free for basic use, available

[6] UBS successfully pilots blockchain-based multi-currency payment solution with UBS Digital Cash, ubs.com

[7] Mastercard announces Multi Token Network (MTN) to scale and secure blockchain technology, Mastercard.com

[8] Conducted trials and experiments with the Trigger Solution, bundesbank.de

[9] European Banking Authority Report on Tokenised Deposits,eba.europa.eu

online/offline, and privacy-protective by design[10]. However, important details are still being decided in the ongoing investigation phase.

### Strengths

- As a central bank-issued currency, a digital euro would carry the full faith and credit of the ECB. There's no credit risk and no reliance on any intermediary's solvency.
- Because it would be an official euro, the digital euro could be interoperable across the entire European economy by default. One unified digital euro would avoid the fragmentation issue of multiple bank tokens or stablecoins

### Weaknesses

- A decision on issuing it will follow legislation and could come around 2027-2028.
- To avoid disrupting the banking system, the digital euro may come with restrictions on holdings or transactions. Policymakers have discussed limits to prevent massive shifts out of bank deposits. Such limits could reduce the utility of the digital euro for big-ticket on-chain settlements or as a store of value.

### Developments & Next Steps

The ECB is running two parallel workstreams**:** a *retail* digital euro (rCBDC) aimed at the public and a *wholesale* CBDC (wCBDC) aimed at banks and market infrastructures.

The retail project is in a two-year preparation phase (Nov-2023→Oct-2025) focused on rule-book design and vendor selection, while the wholesale track has already settled €1.6 billion in trials and will open an "interim" DLT-settlement service later in 2025. Legislation for the retail euro is still in Parliament; a go/no-go issuance decision is pencilled in for 2025-26. Here are the key dates and the latest news items for both tracks.

[10] Eurosystem proceeds to next phase of digital euro project, ecb.europa.eu

## Retail Digital Euro (rCBDC) – Timeline & Milestones

| Date | Phase | Milestone |
|---|---|---|
| 05. May 25 | Innovation Platform | ECB launched a sandbox with ~70 market players to test retail use-cases |
| Oct 25 | Prep-phase ends | ECB to present final rule-book & vendor shortlist to Governing Council |
| 2025-26 | Decision point | Governing Council will decide whether to issue; depends on legislative adoption |
| Earliest 2027-28 | Pilot / Launch | Limited roll-out to citizens if approved, after 18-24 months implementation window (ECB estimate) |

***Table:*** *References: Digital euro In "A new plan for Europe's sustainable prosperity and competitiveness"[11]; ECB partners with private sector through digital euro innovation platform[12]; Timeline and progress on a digital euro[13]; Harnessing the digital future of payments: Europe's path to sovereignty and innovation[14]*

## Wholesale CBDC (wCBDC) – Timeline & Milestones

| Date | Phase | Milestone / Update |
|---|---|---|
| 20. Feb 25 | Interim service announced | Two-step approach approved: the Governing Council will let the current Trigger and Hash-Link pilots keep running while it works on one common system |
| H2 2025 | Design choice | ECB must choose between (a) launching a single wholesale-CBDC network for the entire euro area or (b) simply upgrading today's interim connections. |
| 2026-27 | Industrialisation | If approved, wholesale-CBDC rails will plug directly into TARGET Services and major FMIs |

***Table:*** *References: Eurosystem expands initiative to settle DLT-based transactions in central bank money[15]; ECB confirms interim wholesale DLT settlement solution[16]; Exploratory work on new technologies for wholesale central bank money settlement[17]*

***"We need to prepare our currency for the future"*** [18]

***Christine Lagarde***

[11] Digital euro in "A new plan for Europe's sustainable prosperity and competitiveness", europarl.europa.eu

[12] ECB partners with private sector through digital euro innovation platform, ecb.europa.eu

[13] Timeline and progress on a digital euro, ecb.europa.eu

[14] Harnessing the digital future of payments: Europe's path to sovereignty and innovation, ecb.europa.eu

[15] Eurosystem expands initiative to settle DLT-based transactions in central bank money, ecb.europa.eu

[16] ECB confirms interim wholesale DLT settlement solution, ledgerinsights.com

[17] Exploratory work on new technologies for wholesale central bank money settlement, ecb.europa.eu

[18] Eurosystem proceeds to next phase of digital euro project, ecb.europa.eu

### Overview of On-Chain Euro Solutions A, B, C

It's worth noting that these solutions are not mutually exclusive, they can complement each other. In the interim before a digital euro, Solution A and B could fill the gap: euro stablecoins might be used for retail Decentralized Finance (DeFi) and cross-border commerce, while bank deposit tokens handle large institutional flows. Once the digital euro (Solution C) arrives, it could directly integrate or even use the infrastructure set up by Solutions B.

In any case, each solution brings us closer to the goal of an on-chain euro, and each provides significant benefits in terms of speed, efficiency, and trust. The key strategy for any market player is to stay flexible and possibly engage in pilot uses of all three. Use stablecoins where appropriate now, support bank token initiatives, and prepare systems for a future digital euro connection. This approach allows for unlocking immediate benefits through private solutions, while also positioning for the long-term vision of a CBDC-powered on-chain economy.

## 3. Why This Matters: Strategic Importance for Financial Institutions

In conclusion, the payment leg on-chain is more than just an operational change**,** it is a foundational step toward a new financial market infrastructure**.** Buy-side firms that monitor and experiment with these developments stand to gain efficiency, reduce risk, and access new opportunities for alpha (or at least avoid falling behind their peers in delivering value to clients).

Sell-side firms that take the lead in this space can establish their role in the tokenized economy, diversify revenue streams, and streamline operations to enhance both profitability and resilience.

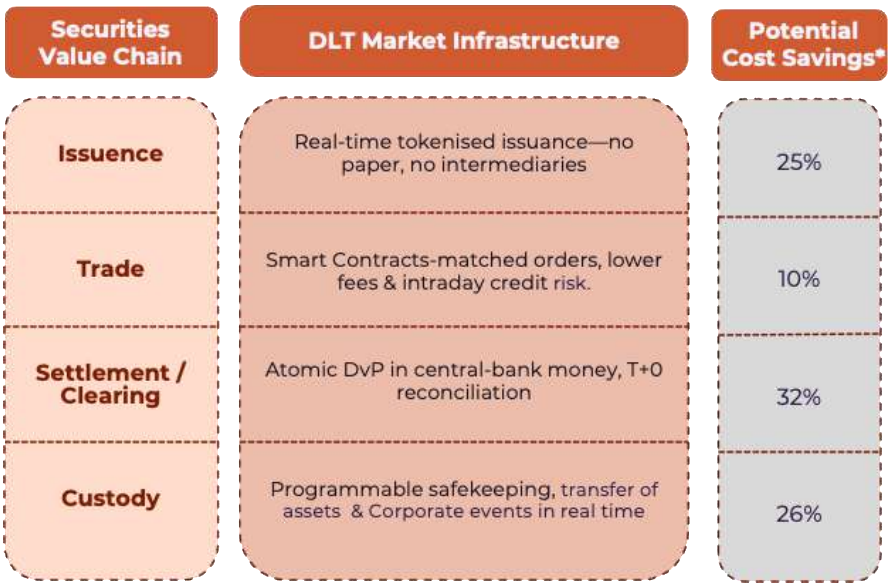
Both sides ultimately share an interest in a more robust, efficient, and secure financial system, and an on-chain payment leg is central to that vision. It's saying that even regulators and central bankers are actively encouraging this evolution, from MiCA enabling stablecoins with certain constraints to the ECB testing DLT for settlements, signaling a broad consensus that this is the future.

# 4. The Path Forward

Firms should treat developments like euro stablecoin launches, bank token networks, and the digital euro not as isolated tech experiments, but as strategic milestones. By staying informed and by investing in internal capability (perhaps setting up a task force or a pilot transaction using on-chain Euros), both buy-side and sell-side institutions can ensure they are prepared to transact seamlessly when cash and assets routinely meet on-chain.

That time is fast approaching. The financial institutions that have prepared, by building connections and shaping the direction, will be best positioned to thrive in the era of end-to-end Digital finance.

***Benefits of end-to-end Digital Finance***




**The estimated potential cost savings were presented at the Crypto Assets Conference (CAC) 2024 by WEPEX, and previously at CAC21 by Roland Berger*

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**"The next generation for markets, the next generation for securities, will be tokenization of securities"**

**Larry Fink | CEO of BlackRock**

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