



EUROPEAN CENTRAL BANK

EUROSYSTEM

Participation in the Eurosystem's exploratory work

Agenda item 1

18 June 2024



Eurosystem's exploratory work – overview of interested parties



Very strong demand from market stakeholders showcasing the relevance of exploratory work



New market participants and new market DLT operators will join as of wave 2



In addition, wave 1 participants added new use cases to explore with



All use cases, the Eurosystem focused on in its call for expression of interest are covered in the proposed experiments and trials

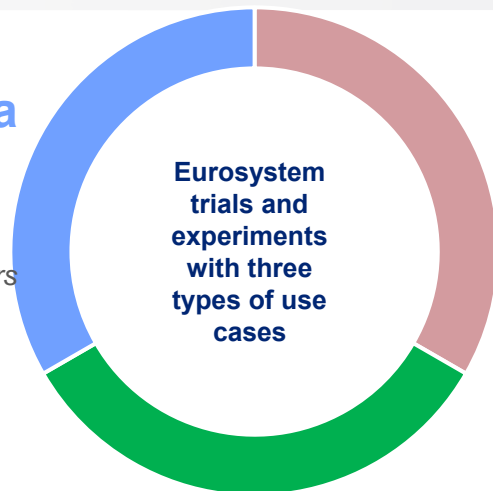
Trials and experiments at a glance

Domestic payments use cases within the euro area

(experiments = mock settlement)

- ✓ Automation of margin calls
- ✓ Tokenised deposits / deposit tokens transfers
- ✓ Automation of interbank settlement and reconciliation

Who: commercial banks, CCPs



Securities related use cases

(trials = real settlement ; experiments = mock settlement)

- ✓ Issuance and distribution of securities natively on DLT (e.g. Commercial paper, bonds, tokenised funds)
- ✓ Secondary market transactions (1st exp already completed !)
- ✓ Securities lifecycle management: coupon payment, asset servicing, redemption
- ✓ Repo

Who: commercial banks, CSDs, CCPs, investors, issuers, trading venues

International use cases with other central banks

(experiments = mock settlement)

- ✓ PvP FX settlement
- ✓ [Meridian FX](#) using the three solutions of the Eurosystem

.. And in parallel with trials and experiments

Continued research into DLT and new technologies

- ✓ Policy analysis on impact of DLT and implications
- ✓ Further in-depth analysis of other solutions for CeBM settlement (DLT-Integration and DLT-Distribution)



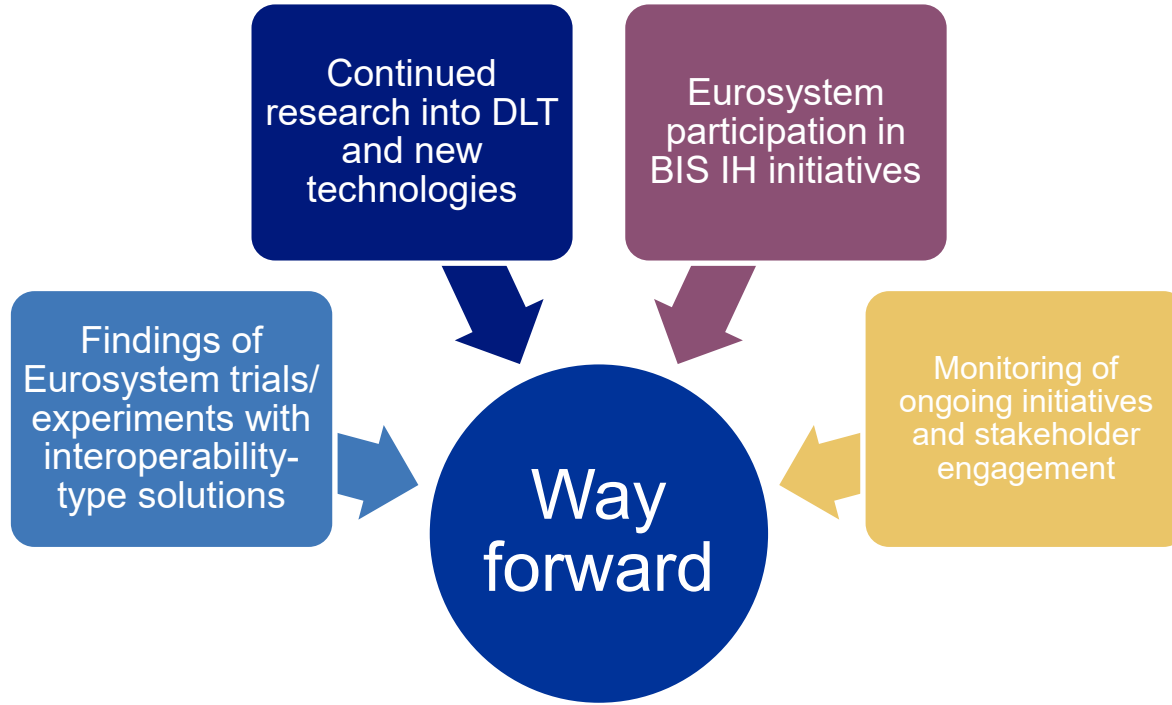
Monitoring of ongoing initiatives and stakeholder engagement

- ✓ Dedicated Eurosystem Market Contact Group for new technologies and wholesale settlement: 60+ European and international market stakeholders
- ✓ Monitoring of other central bank / BIS initiatives: e.g. Singapore, Switzerland

Eurosystem participation in other BIS-IH initiatives

- ✓ Meridian FX
- ✓ Agorá
- ✓ Rialto (via Eurosystem centre)

Way forward following Eurosystem exploratory work



NTW-CG members feedback on potential further steps after exploratory work

From the online questionnaire

(the feedback presented represents the consolidated views of the NTW-CG members that provided feedback to the questionnaire)

Which existing or new key objectives and/or key questions could benefit from being further explored after the current phase of exploratory work?

Objectives reported by multiple respondents:

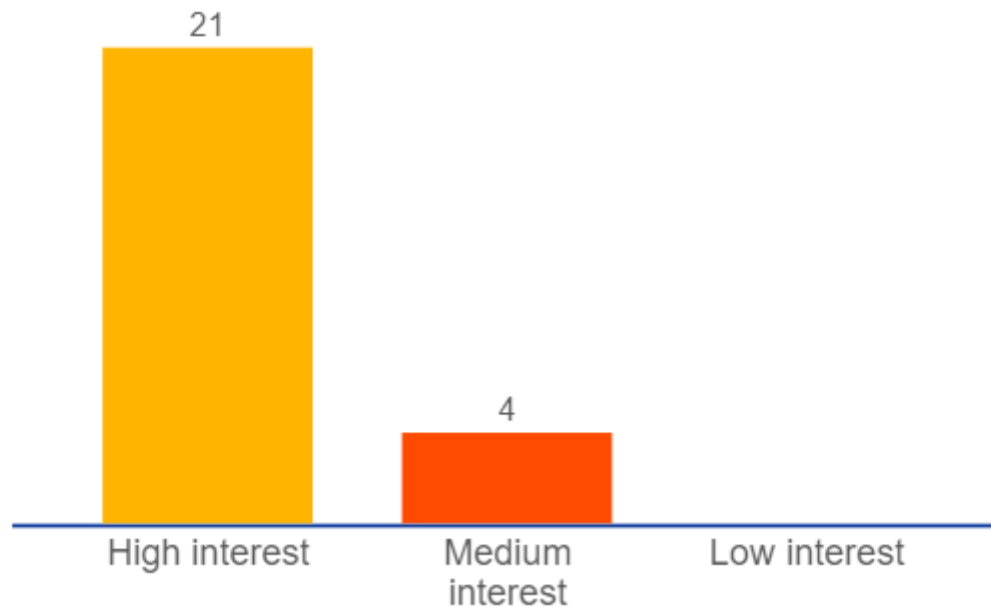
- Stronger focus on PvP and cross border transactions – international context
- Investigating scalability and implications of moving to production-like setup (legal, regulatory, political)
- Impact on near-time settlement on liquidity and treasury
- Ensuring interoperability among the different solutions in the international context – avoid fragmentation across regions
- Identify most appropriate setup for various market segments and use cases (e.g. permissionless / permissioned – which solutions among the three currently tested)
- Availability of a Eurosystem wCeBM solution within short term

Why should these objectives and/or questions be further explored later, rather than during the exploratory work?

Dependencies reported by multiple respondents:

- Need to scale first (both the market DLTs and the investors base)
- Need to dialogue with other central banks (PvP and cross border initiatives)
- Better understanding of the interoperability solutions after exploratory work is concluded (potential incremental improvement) and which use cases the market is interested the most
- Follow an incremental approach from the current setup
- Time and scope: broader participation and more complex use cases
- Now interoperability between market DLT and interoperability solution, then focus on how to connect market DLT among themselves (interoperability between asset chains)
- Integration and Distributions currently not in scope and should be explored later

What is your interest in the Eurosystem taking further steps after the Eurosystem exploratory work?



In term of scope: In your view, which further steps could the Eurosystem take after the current phase of the Eurosystem's exploratory work?

Further steps reported by multiple respondents:

- **Short term:**

- Refine current solutions, Eurosystem moving towards real-life scenarios, possible implementation plan for quick availability
- More complex use cases (repos, on chain collateral; on chain derivatives, DEFI, programmable Payments, margin calls). PvP between CeBM and commercial bank money tokens
- Overnight wCeBM balances and 24/7 settlement
- Cross border have a closer look at the PvP use case (CB money against CB money/commercial bank money)
- Detailed analysis of risks and governance of interoperability solutions

- **Medium term:**

- Explore distribution and integration model
- Converge towards market standards for assets on chain
- Investigate the idea of unified ledger, cross border with other regions, PvP with other central banks, Interoperability network, such as the Regulatory Liability Network / Project Agora / Unified Ledgers with commercial banks and other key central banks

Why do you think would it be useful for you / the market that the Eurosystem takes further steps?

Answers reported by multiple respondents:

- Maintain the primary role of the Eurosystem on new technologies experimentations
- Contain stablecoins expansions. Advantage of CeBM over stablecoins for settlement
- Facilitate digital transformation of European financial markets
- Keep the momentum of current European initiatives

Exploratory work

Update on
international context

Project Agorá

Recap: The project by the BIS and seven central banks, builds on the unified ledger concept proposed by the BIS and will investigate how tokenised commercial bank deposits and central bank money can be seamlessly integrated in a public private programmable financial market infrastructure.

Updates: Since the last meeting of the NTW-CG the [call for private sector participation](#) was published on 14 May and was closed on 31 May.

Project Meridian FX

As part of with Eurosystem exploratory work, the Eurosystem will participate in project Meridian FX to explore the usage of the synchronisation operator, developed in project Meridian, also for FX settlement

More information will be provided in item 2.1 of today's meeting

Exploratory work

Communication

The Eurosystem actively communicates about the progress of the work

Since the first [press release](#) in April 2023, the ECB shares updates and invites the financial market to participate in the setup of exploratory work via its communication channels (ECB's website, X, LinkedIn, MIP newsletter)



In addition, National Central Banks publish own communications and reshare the communication of the ECB

¹ Update: now published

Exploratory work will be accompanied by further communication from the Eurosystem

The Eurosystem



will further use its communication channels and invites the financial market stakeholders to share the information provided and use the published documents as reference in their own communication



reserves its right to be the first to share certain information, e.g. the detailed results of trials and experiments and comparative overview

Communication guidelines for market stakeholders

Participating entities are invited to:



Communicate on the successful completion of their trials and experiments including transactions settled, involved market participants and market DLT operators as well as technical service providers



Provide their views on the ability/advantage/opportunity to settle in central bank money in the context of new technology making reference to the Eurosystem's exploratory work on new technologies



Refrain from making statements about the perceived comparative performance of one or the other interoperability-type solution and from making recommendations on which solution should be implemented



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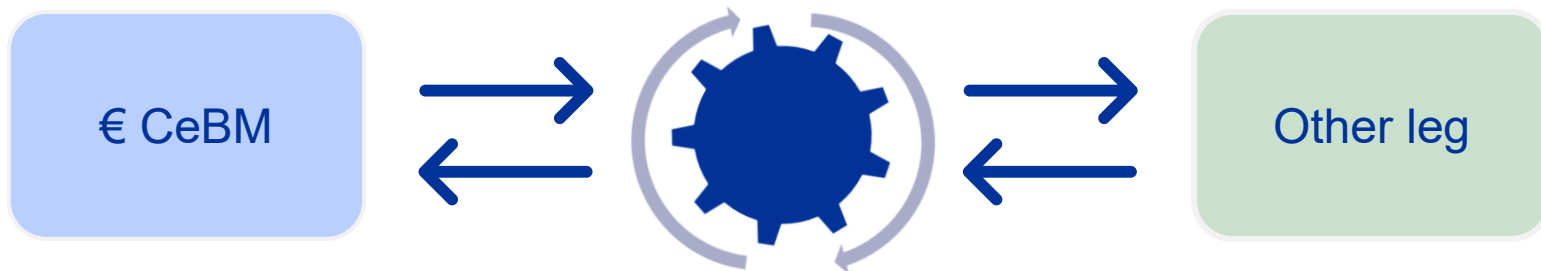
Implications of new technologies for settlement and liquidity management

Agenda item 2.1



18 June 2024

Settlement in Eurosystem exploratory work (1/2)



3 solutions and different Interoperability mechanisms to synchronise settlement

- Trigger Solution (HTLC, basic approach without HTLC)
- TIPS Hash Link (API Gateway)
- DL3S – DLT Interoperability (HTLC, Swift connector)

3 types of use cases

- DvP: other leg is a digital asset
- PvP FX: other leg is CeBM denominated in another currency
- Automated payments: single payment (no other leg) or interlinked payments (other leg are EUR CoBM payments)

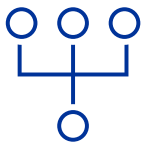
Settlement in Eurosystem exploratory work (2/2)

Across the solutions and the different use cases, common features explored:



(near) instant settlement in central bank money on a gross basis

- Benefit: safe settlement with no counterparty risk



Atomic and synchronised settlement of two (DvP, PvP) or more legs (FX PvPvP, DvPvP and interlinked EUR CeBM / CoBM payments)

- Benefit: complex transactions and processes are settled as one conditional transaction, reducing risks



Implications of these features compared to today's settlement process and market practices (e.g. for liquidity management)?

Focus on the explored setup for PvP FX (1/2)

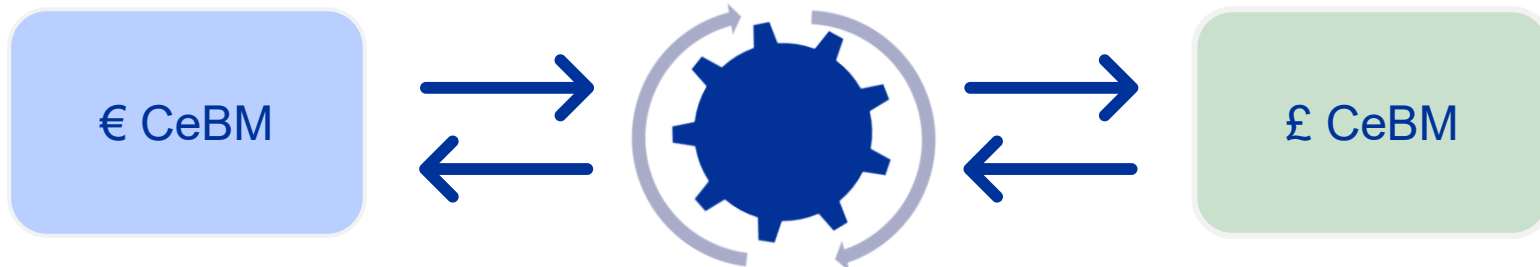
The Eurosystem will concretely explore in 2024 PvP(vP) FX in dedicated experiments:

- One experiment with the Full-DLT Interoperability and another central bank's DLT network: *[updated¹] HKMA*
- One experiment connecting all 3 Eurosystem solutions to another central bank's interoperability solution:
 - BSIH Project Meridian FX is a joint project by the BIS Innovation Hub, the Bank of England and the Eurosystem – [for more information](#)
 - Meridian FX will explore synchronised FX settlement in EUR and GBP

¹ After the meeting date, the list of entities being admitted to the Eurosystem exploratory work as part of wave 2, as approved by the ECB Governing Council, [has been published](#).

Focus on Meridian FX

Use cases: PvP FX and PvPvP FX (e.g. for applications of FX settlement with bridge currencies)



3 Eurosystem solutions

- Trigger Solution
- TIPS Hash Link
- DL3S – DLT Interoperability

**Synchronisation and connection
between solutions to be developed
as part of the Meridian FX project**

RTGS (CHAPS)



EUROPEAN CENTRAL BANK

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Implications of new technologies for settlement and liquidity management

Agenda item 2.2



18 June 2024

Background information

Using new technologies for wholesale settlement would likely have implications on the functioning of the ecosystem for wholesale payments. We want to collect and discuss with you your views on the implications and prepared the following questionnaire

Important: The following questions aim to prepare the ground for the exchange in the meeting and don't have to be answered beforehand. You are invited to inform the [NTW-CG Secretariat](#) in case you see further implications that you want to be discussed in the CG-meeting.

Impact of new technologies on settlement

Question 1:

- In a new technology context, would you support financial markets to move to t+0 or even instant gross settlement of wholesale transactions?
- If yes, for which asset classes?
- What concerns, e.g., for treasury / liquidity management / security financing / market making would you have for such a move?
- How could those concerns be addressed?

Impact of new technologies on settlement

Question 2:

- What role would or should netting play for different markets and instruments?
- Would netting still be relevant for FX or securities transactions or would other approaches be possible?

Harmonisation and risk of fragmentation

Question 3:

- Would there be a case for harmonising practices between markets? To what extent does DLT mitigate and / or exacerbate the risk of re-fragmentation of the market / emergence of diverging standards?

For central bank money settlement

Question 4:

- For central bank money settlement: what arguments would determine your choice between an imperfect solution that is available early compared to a more advanced solution that would be available later?