



BANQUE CENTRALE DU LUXEMBOURG
EUROSYSTEM

AmiSeCo LSG*

Digital Assets and wholesale CBDC

24/10/2023 – Luxembourg - Virtual

Disclaimer: The views expressed in this presentation are solely those of the presenters and not necessarily those of the BCL or the Eurosystem

*Advisory Group on Market Infrastructures for Securities and Collateral (AmiSeCo) Luxembourg National Stakeholder Group (LSG)





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1/ Introduction and opening remarks



AmiSeCo LSG

Digital Assets and wholesale CBDC

List of members

ABBL
Banque et Caisse d'Epargne de l'Etat
BCL
BGL BNP Paribas S.A.
BIL S.A.
Clearstream Fund Centre S.A (CFCL)
Clearstream International SA
CSSF
Goldman Sachs Bank Europe SE, Luxembourg Branch
HQLAx

HSBC Bank Plc, Luxembourg Branch
LuxCSD
Luxembourg Blockchain Lab
Luxembourg State Treasury
Luxembourg Stock Exchange
Montis Digital S.A.
Neofacto
Société Générale Bank & Trust S.A.
JP Morgan (New Member)
Worldline (Guest member)

AmiSeCo LSG

The nature of this meeting

EU level

AMI-SeCo

The [Advisory Group on Market Infrastructures for Securities and Collateral](#) facilitates an active dialogue with market participants on issues related to the clearing and settlement of securities and to collateral management.

ntwCBDC task force (ntw = new technology wholesale)

Explore the **need** and **means** of a delivery to CeBM settlement asset using new technology

ntwCBDC contact group

Liaison with the market for ntw CDBC



LU level

AmiSeCo LSG (Luxembourg Stakeholder group):

- Same objective as AmiSeCo but at local level
- More local voices and views
- Key objectives:
 - Harmonisation of post-trading (EU→local)
 - Views on post-trading (local→EU)

new- AmiSeCo LSG meeting ntw CBDC cluster

- Information from ntwCBDC taskforce → LU market participants
- Stocktake of LU market participants → EU fora

AmiSeCo objectives



Members

Key take-aways from BCL questionnaire
LU market expectations

- A CBDC is necessary
- LU ecosystem must be ready and onboarded
- A critical mass should be reached
- BCL could help the market
- A clear regulation should be available
- Very important topic for LU financial area

BCL

Position

- Act as coordinator in Luxembourg
- Involve as much LU participants as possible
- Make sure LU concerns are recorded at EU level
- Support participants for their application
- Support participants for their trials/experiments

AmiSeCo LSG – ntw CDBC cluster

Past activities

- BCL Technical paper (2020)
https://www.bcl.lu/fr/Recherche/publications/technicalpapers/2020_BCL_Technical-Paper_DCB-Services.pdf
- ECB press release (April 2023)
“Eurosystem to explore new technologies for wholesale central bank money settlement”
<https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230428~6a59f44e41.en.html>
- Ami SeCo LSG: New cluster on Digital assets and wholesale CBDC (Since April 2023)
https://www.bcl.lu/fr/systeme_paiement/working-groups/AMISECO/index.html
- ECB contact group (since June 2023)
<https://www.ecb.europa.eu/paym/groups/ntwcg/html/index.en.html>



2/ Eurosystem Exploratory work

Scope

Reminder: the different models to provide CeBM

3 models have been identified to provide the market with central bank money:

	Euro cash leg	Asset/foreign currency leg
Interoperability	On Eurosystem DLT	On external DLT
Integration	On Eurosystem DLT	On Eurosystem DLT
Distribution	On external DLT	On external DLT

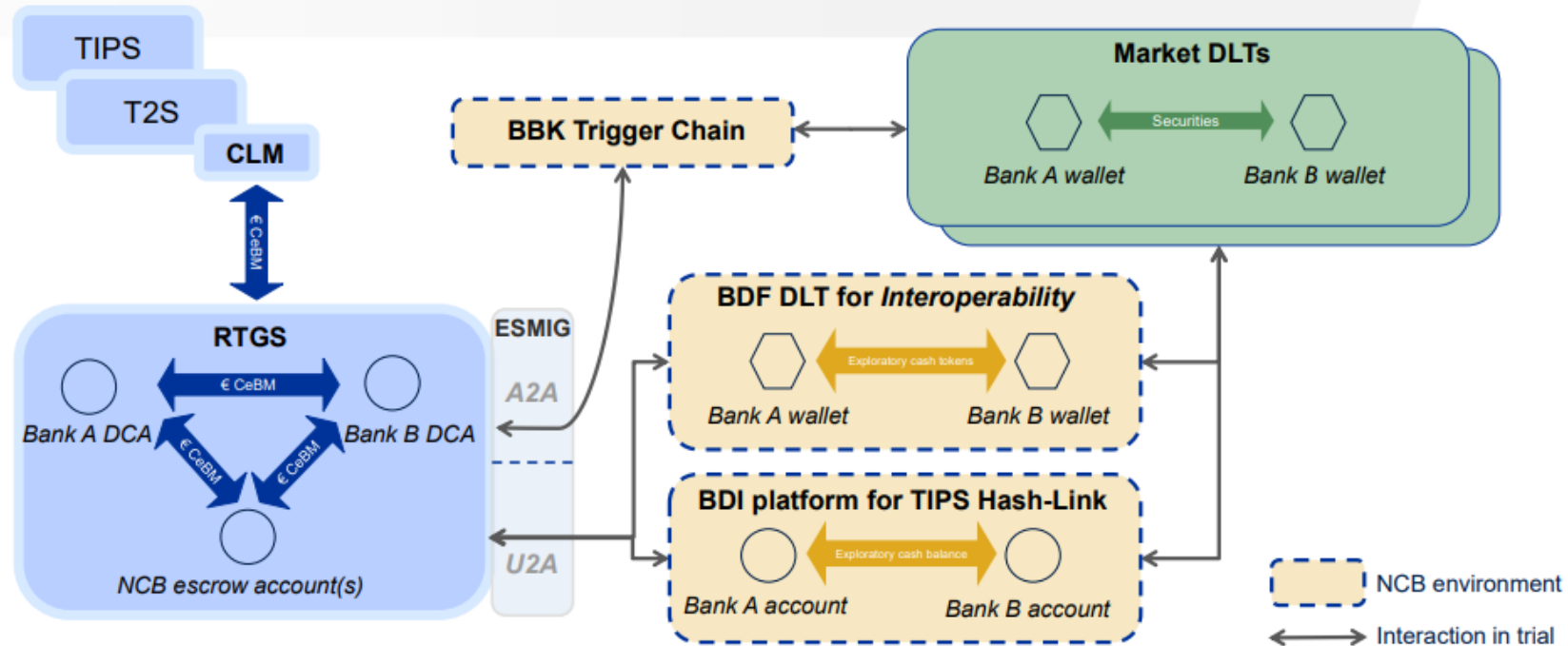
The considered exploratory work will only mobilize the Interoperability option

Scope

Settlement with the 3 interoperability solutions

https://www.ecb.europa.eu/paym/groups/ntwcg/pdf/ecb.ntwdocs230718_presentations_2nd_ntwcg_meeting.en.pdf?4c218e8999d1818e823b3a743883e922

Interoperability solutions in envisioned trial design



Eligibility criteria

- 2 types of participating actors:

Eligible market participants

are defined as those entities with access to T2, within the meaning of Article 4 of Annex 1 Part I and Article 7, Annex 1 Part I of the TARGET Guideline1, as amended from time to time.

= **TARGET Participants**

Market DLT platform operators

could be:

1. **Central securities depositories (CSDs)**, authorised under the CSDR, operating a Securities Settlement System based on DLT / operating a DLT platform (including T2S CSDs subject to a derogation of the contractual and regulatory framework of T2S);
2. Operators of a DLT settlement system or a DLT trading and settlement system as authorised under the **DLT Pilot Regime Regulation** (Regulation 2022/858);
3. Investment firms and **market operators** and other licensed financial institutions operating a DLT platform, as duly licensed under the national law transposing **MiFID II** or under other relevant national legal frameworks subject to an assessment.

Planning / Schedule

Next steps:

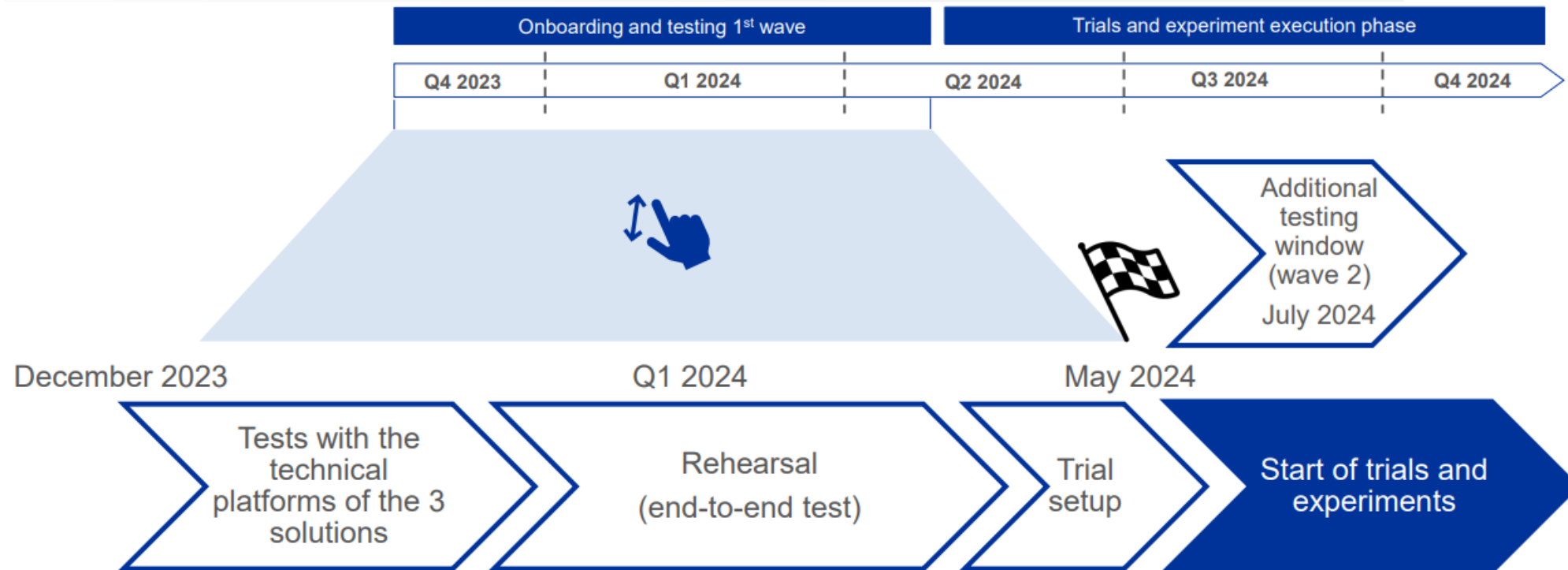
- A [survey](#) is ongoing to declare (informally) your potential use cases – see next slides
- End of Q4 2023: [expression of interest](#) to (formally) ask to participate in the exploratory work
- A public [information session](#) on further details on the scope Eurosystem exploratory work is planned shortly after.
- Following the signing of a [legal framework](#) in 2024, the trials and experiments would start.
- [Two](#) possible [onboarding and experimentation](#) waves would be provided during the envisaged overall duration of the exploratory work (maximum of 6 months):
 - first wave, possibly starting in Q2 2024
 - second wave, possibly starting in Q3 2024

Participants would, subject to operational capacity constraints, be onboarded in the preferred wave for the solution(s) they wish to experiment and trial with after the call for expression of interest.

Planning / Schedule

(extract from ECB Contact Group 20 Oct 2023)

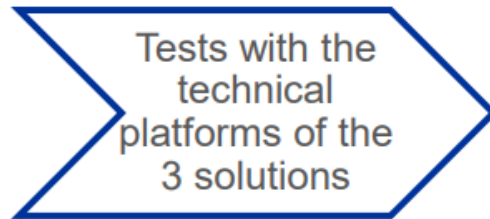
Testing activities – overall approach*



Planning / Schedule

(extract from ECB Contact Group 20 Oct 2023)

Testing activities – content of the activities (1/3)

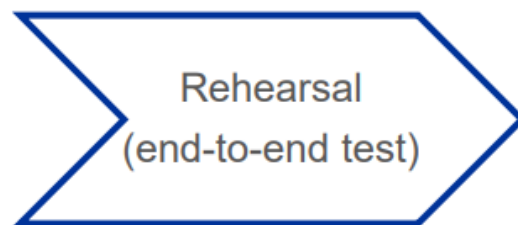


- These testing activities do not require connecting to TARGET Services
- Content of testing may depend on the use cases and the chosen solutions
- **When:** from December 2023 until Q1 2024
- **Where:** market DLT platforms and the interoperability-type solutions' technical platforms
 - Trigger Chain DLT
 - TIPS Hash Link platform
 - DL3S DLT
- **What:** connectivity, operational and functional tests for each solution that participants want to connect to for trials and experiments:
 - For all market participants: connecting to the Interoperability solutions' technical platforms and the market DLT, opening exploratory cash accounts (TIPS Hash Link only) and exploratory cash wallets and sub-wallets (DL3S only)
 - For market DLT platform operators or participants in charge of DVP: testing the interoperability mechanism to orchestrate a DVP* between the market DLT platform and the Interoperability solutions

Planning / Schedule

(extract from ECB Contact Group 20 Oct 2023)

Testing activities – content of the activities (2/3)



- Content of testing may depend on the use cases and the chosen solutions
- **When:** Q1 2024 - Q2 2024
- **Where:** TARGET Services UTEST, market DLT platforms and the interoperability-type solutions' technical platforms
 - Trigger Chain DLT
 - TIPS Hash Link platform
 - DL3S DLT
- **What:** rehearsing a full trial intraday process e.g. from 09:00 to 14:00 or an experiment's process
 - For all market participants and market DLT operators interested in conducting trials: running the trial SoD process, settling multiple DVPs during the settlement window, running the trial EoD process.
 - Specifically for experiments: content of these testing activities would depend on the planned content of the experiments envisioned by market participants.

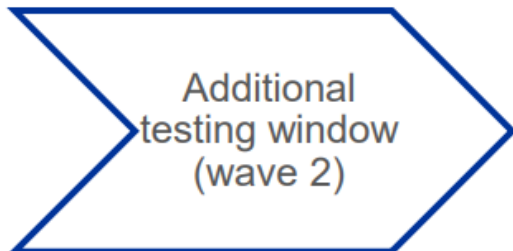
Planning / Schedule

(extract from ECB Contact Group 20 Oct 2023)

Testing activities – content of the activities (3/3)



- **When:** Q1 2024 - Q2 2024
- **Where:** TARGET Services PROD – T2 Service
- **What:** connectivity, static data setup in T2 for trials
 - For all solutions: market participants can open new RTGS DCAs to segregate trial-related settlement by submitting a request to their local NCB – this is not a requirement
 - For TIPS Hash Link and DL3S (with escrow process): market participants register their RTGS DCA to be used for the escrow process - where they would receive the funds back during the defunding process at the end of the trial intraday process (e.g. by 15:30)
 - For the Trigger Solution (without escrow process): market participants register their RTGS DCA to be used for the Trigger settlement process by submitting a request for a direct debit mandate setup to their local NCB



- **When:** July 2024
- **What and where:** repeat of testing activities conducted for wave 1 for those starting exploratory work late (noting that same end date, Nov 2024, will apply)

Survey

- **Survey on Eurosystem plans for trials and experiments on new technologies for wholesale central bank money settlement**

https://www.ecb.europa.eu/paym/intro/news/ecb.dedocs231013_annex.en.pdf

Survey

0%

Please provide the following information:

***** General information

i This question is mandatory

Name of institution

Name of contact person

Email address of contact person

Phone number of contact person

***** Our institution considers participating as

i Choose one of the following answers

i This question is mandatory

Participant (such as investors, issuers)

Market DLT Operator

Previous

Next

Survey

25%

For participants:

This group of questions are specific for market actors (such as issuers, investors) that would like to participate to the Eurosystem exploratory work with their business cases by relying on the DLT market infrastructures of third party platforms providers

Our institution is interested in experimenting or trialing with the following solution(s):

An overview of the solutions can be found [here](#). [multiple answers possible]

▶ Check all that apply

Trigger Solution

TIPS Hash Link Solution

Full DLT Interoperability Solution

Not decided yet

Please provide a high-level description of the potential DvP or PvP use case that your institution would like to explore within the exploratory work (e.g. problem / opportunity statement, role of your institution, involved actors, timeframe, type of financial instrument):

Survey

We would like to participate in [multiple answers possible]

📌 Check all that apply

<input type="checkbox"/> Trials: with real-life settlement of central bank money
<input type="checkbox"/> Experiments: with mock settlement of the asset and cash legs
<input type="checkbox"/> Not decided yet

By when would you intend to participate in the exploratory work (Note that the overall duration of exploratory work will be defined and fixed for a specific period of 6 months. Also, note that prior to the starting date of exploratory work, the onboarding process mainly consisting of testing activities and the signing of the legal framework must have been completed)?

📌 Choose one of the following answers

<input type="radio"/> In the first wave, possible starting in May 2024 earliest
<input type="radio"/> In the second wave, possibly starting in Q3 2024
<input type="radio"/> Not decided yet
<input checked="" type="radio"/> No answer

Previous

Next

Survey

50%

For DLT market operators:

This group of questions is specific for market actors that would like to participate to the Eurosystem exploratory work by providing their own DLT market platforms and connect them to the Eurosystem interoperability solutions

For which Eurosystem solution(s) would you offer the market DLT platform?

An overview of the solutions can be found [here](#). [multiple answers possible]

i Check all that apply

- Trigger Solution
- TIPS Hash Link Solution
- Full DLT Interoperability Solution
- Not decided yet

Under which legal framework would you perform such exploration?

i Choose one of the following answers

- Standard CSD License
- DLT Pilot Regime Regulation
- National law for the settlement of digital assets transposing MIFID II
- Other:
- No answer

Survey

Please provide a short description of the DLT platform you intend to provide for the settlement of the asset leg during the Eurosystem exploratory work (e.g., technology, public/private, permissioned/permissionless, consensus mechanism, governance, smart contracts)

In case such information is available, please provide a rough indication of how many market participants can or will participate through your market DLT platform in the experiments and/or trials.

i Only numbers may be entered in this field.

We would like to participate in the exploratory work starting: (Note that the overall duration of exploratory work will be defined and fixed for a specific period of 6 months. Also, note that prior to the starting date of exploratory work, the onboarding process mainly consisting of testing activities and the signing of the legal framework must have been completed)

i Choose one of the following answers

<input type="radio"/> In the first wave, possibly starting in May 2024 earliest
<input type="radio"/> In the second wave, possibly starting in Q3 2024
<input type="radio"/> Not decided yet
<input checked="" type="radio"/> No answer

Previous

Next

Survey

75%



Additional information

What type of additional information, if any, would your institution require to take a decision on participation in the call for interest in Q4 2023?

Previous

Submit

End of trials assessment (extract from ECB Contact Group 20 Oct 2023)

Expected deliverables of trials and experiments



Compare the 3 Interoperability-type solutions from a business, operational and technical perspective

- *relying on the experience and input provided by market participants during trials and experiments*



Understand concretely the added value of new technologies to wholesale settlement and capital markets: potential expected gains (if any) compared to existing infrastructures (e.g. efficiency, competition, market access) and potential negative implications (e.g. fragmentation)

- *based on the business cases put forward by market participants in trials and experiments*



Learning strategy and detailed learning objectives to achieve this

End of trials assessment

(extract from ECB Contact Group 20 Oct 2023)

Themes to be investigated in the Exploratory work (1/2)

(details provided at the end of the presentation)

- Nine high-level themes have been identified to improve the Eurosystem knowledge on the interoperability solutions.
- DvP and security life-cycle use cases are prioritised: objectives for other use cases (such as PVP) will advance together with the use case definition.



Themes investigated directly via trials and experiments:

1. Settlement performance and efficiency
2. Reliability and safety
3. Information management
4. Automation features
5. Integration of interop. solutions with new environments (market DLTs)
6. Energy consumption

End of trials assessment

(extract from ECB Contact Group 20 Oct 2023)

Themes to be investigated in the Exploratory work (2/2)

(details provided at the end of the presentation)



Themes investigated with in-depth research:

1. Integration of interoperability-type solutions with existing environments (TARGET Services)
2. Liquidity management and settlement finality
3. Preliminary and qualitative cost analysis



Themes still being evaluated / under definition:

1. *PVP – specific aspects (will be added once detailed scope of PVP work is finalised)*
2. *Interlinked CeBM – CoBM payments*
3. *Additional suggestions by the Contact Group*

End of trials assessment (extract from ECB Contact Group 20 Oct 2023)

Learning strategy

The role of market participants' trials and experiments



Market participants and market DLT platform operators will be asked to share the results and the relevant findings of their trials and experiments with the Eurosystem via

- harmonised reporting templates including key performance indicators for the different learning objectives, for both qualitative data (e.g. surveys) and quantitative data (e.g. settlement timestamps)
- Templates and KPIs will be shared with the Contact Group



Market participants and market DLT platform operators will be asked to share information on their side for the Eurosystem's analysis



3/ Tour de table

Tour de table

- Still interested in CBDC settlement ?
- Would you like to participate to a trial or an experiment ?
 - ✓ *As eligible market participant?*
 - ✓ *As market DLT platform operator?*
- Will you answer the ECB survey ?
 - ✓ Deadline to answer: 31 October!
 - ✓ BCL support needed to answer? Bilateral call possible... please contact us



4/ Worldline presentation



5/ AOB