EUROPEAN CENTRAL BANK

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EUROSYSTEM

T2S CHANGE REQUEST

General Information (Origin of Request)
☐ User Requirements (URD) or GUI Business Functionality Document (BFD)
☒ Other User Functional or Technical Documentation (SYS)

Request raised by: Eurosystem	**Institute:** 4CB	**Date raised:** 28/11/2024
Request title: T2S should process settlement instructions with ISD in the future outside the Start of Day period.		**Request No.:** T2S 0844 SYS
Request type: Common	**Classification:** Scope Enhancement	**Urgency:** Normal
1. Legal/business importance parameter: Medium[1]		**2. Market implementation efforts parameter:** Low[2]
3. Operational/Technical risk parameter: Low [3]		**4. Financial impact parameter:** Medium[4]
Requestor Category: 4CB		**Status:** Authorised by T2S Steering Level

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Reason for change and expected benefits/business motivation:

Start Of Day (SoD) period is a critical phase where T2S platform processes a number of highly consuming tasks to be performed in less than two hours, including:
- Revalidation of pending transactions (on average, 650,000 transactions, including 110,000 with Intended Settlement Date (ISD) higher than Current Business Day (CBD), I.e., D+N transactions).
- Receipt and validation of new instructions (CORP,..) (on average, 82 000 transactions, including 26,000 D+N transactions).

This change request was proposed in the context of the T2S Strategic Evolution initiative (Proposal 1.18) and aims to reduce the pressure on the platform during SoD period and especially to reduce CPU consumption and avoid risks of a delay.

During SoD period, there are two main events that run in parallel, with the following scope:

- Start of Day Communication to Settlement (SCST). This process aims to process:
  A. all Settlement Instructions and Settlement Restrictions that have not yet reached their ISD and therefore are not eligible for settlement, I.e., those with ISD > CBD.
  B. all Settlement Instructions and Settlement Restrictions that have reached their ISD, and, therefore, are eligible for settlement, I.e., those with ISD = CBD.

- Start of Day Revalidation of Recycled Settlement Instructions (SODR). This process aims to revalidate:
  C. all Settlement Instructions and Settlement Restrictions that failed to settle the previous day(s) on their ISD, and, therefore, are eligible for settlement, I.e., those with ISD < CBD.
  D. The potential applicable realignment chain and/or a conditional settlement against all revalidated Settlement Instructions (this complex type of revalidation leads to high CPU consumption)

This process starts immediately after the change of the business date and must finish before the NTS starts since there is a precedent link. This is needed to make sure that only those transactions that are still valid can go through a settlement attempt.

The process consists in:
- performing again the Business Validation,

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[1] Legal/business importance parameter was set to 'Medium' since with this change a better usage of the CPU capacity during Start of Day (SOD) period will be achieved what will help to reduce delays that could impact the timely start of the NTS period.

[2] Market implementation effort parameter was set to "LOW" since this change will only require a short testing campaign from the users.

[3] Operational/technical risk parameter was set to "LOW" since the change is expected not to threaten the Service Level for Participating CSDs or CBs or to have no or insignificant operational impact on the Participating CSDs, CBs or 4CB.

[4] Low < 100kEUR < Low-Medium < 200 kEUR < Medium < 400kEUR < High < 700kEUR < Very high

- cancel all the instructions identified as invalid, and
- inform the T2S Actor accordingly.

Due to the fact that the parallel running of SCST and SODR implies a high use of CPU capacity and that the revalidation of transaction with a future ISD can be processed outside the SoD because they are not eligible for settlement in the next NTS, this change request aims to reorganize the SoD period in order to:

- decrease the CPU consumption, and
- avoid reaching a CPU PEAK at this critical period.

The impact on user side would be that, if following revalidation, a previously valid instruction with future value date becomes invalid, the participant will be informed at a later point in time after the SoD period when this process will be scheduled. An example of the impact on the user side would be as follows:

i.   Realignment Chain recalculation:
A transaction matches and is validated in the system on Business Day (BD) = D, with ISD = D+10. This transaction also covers a realignment instruction in the Delivering CSD and another one in the Receiving CSD. On BD= D+1, during SoD, this transaction is revalidated and cancelled because there was a change in the realignment path (E.g., due to change of technical issuer CSD). When this change is implemented, this notification with be deferred and sent to the users at a later point in time during the business day.

Description of requested change:

The change consists in deferring the revalidation process of instructions with a future settlement date (A transactions on previous section) to a suitable less critical period after SoD.

1- Give priority to the instructions with the current business day as intended settlement day, I.e., CBD = ISD, including failing instructions recycled from previous days;
2- Postpone the revalidation of instructions with a future settlement date to another period in the scheduler (to be defined in the context of the preliminary assessment).

The new revalidation event (SCSF) for instructions with a future ISD will have the following details:

At the End of SoD period, before NTS start: It is a less critical period, with no other processes running, minimising the risk of conflicts.

- It will succeed event SODR, in order to not run in parallel with the processes triggered by SRR2 and SCST.

- It will not precede any critical NTS events, allowing it to run without blocking the start of NTS in case it fails.

- It will precede the end of NTS (ENTS), allowing it to complete before RTS.

There will be an impact on the scheduler to be considered.

Submitted annexes / related documents:

Outcome/Decisions:

*CRG on 8 January 2025: the CRG agreed to launch the preliminary assessment of CR-0844.
*CRG on 20 May 2025: the CRG agreed that option 1 should be the preferred one and agreed to reflect this in the CR Scope section.
*CRG on 18 June 2025: the CRG agreed to recommend CR-0844 for authorisation by the Steering Level.
*CSG on 27 June 2025: the CSG agreed to authorise CR-0844.
*NECSG on 27 June 2025: the NECSG agreed to authorise CR-0844.
*MIB on 4 June 2025: the MIB agreed to authorise CR-0844.

Documentation to be updated:

T2S   **Change Request: T2S-0844-SYS**
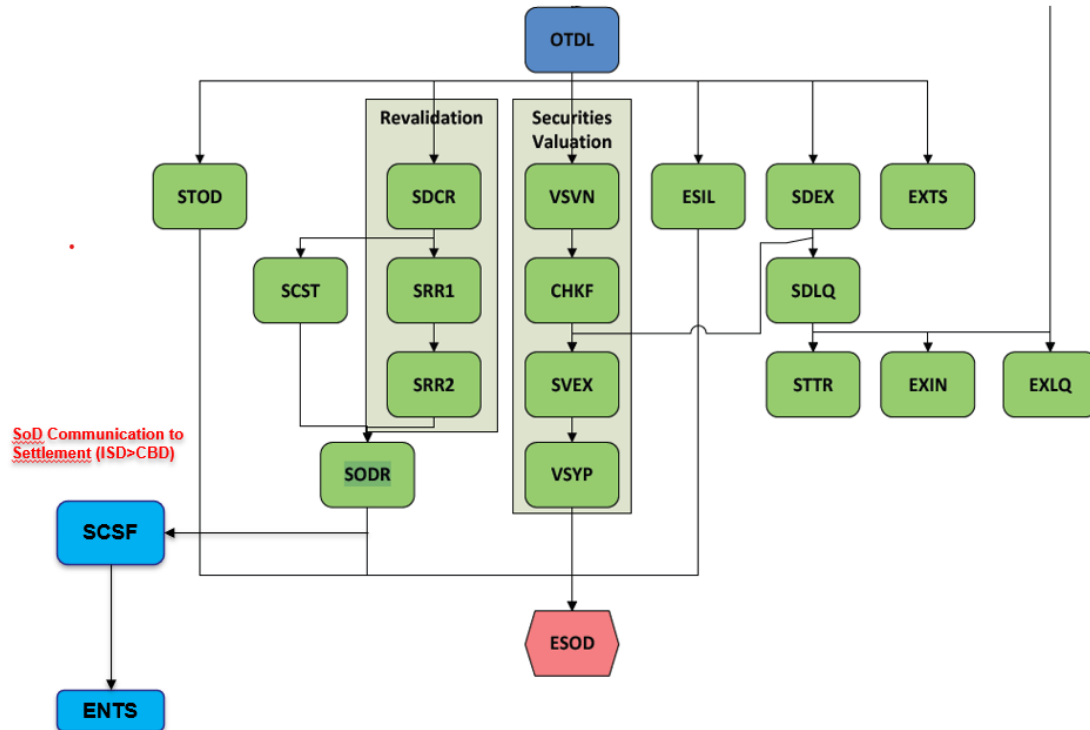
Preliminary assessment:

- **Financial impact: Medium**
- **Impacted modules: SETT, BDM, LCMM**
- **Impact on other Eurosystem Services or Projects: No impact on other Services or Projects**
- **Risk analysis: No risks have been identified during preliminary assessment**
- **Findings:**
    o The target of the CR is to postpone the revalidation of instructions with an Intended Settlement Date (ISD) in the future and prioritize the settlement instructions with ISD <= Current Business Date during the current revalidation period.
    o To meet the requirement, the Settlement Day will be updated so as to trigger the revalidation of instructions to be settled in the future (the ones with ISD > Current Business Date) upon the reception from the Scheduler of a new event "SCSF" (SoD Communication to Settlement – Future), instead of the "SRR1"/"SRR2" currently.
    o A new event will trigger the process SoD Communication to Settlement (ISD>CBD), which selects matched Settlement Instructions and Settlement Restrictions with ISD > CBD and sends them to SETT for further processing.
    o The new event "SCSF" will be triggered at the end of the "SODR" event which will still be triggering the revalidation of settlement instructions which have reached their ISD.
    o The consequence of the proposed change will consist of delaying the revalidation of settlement instructions in the future for approximatively 1h15min.
    o Support in the configuration of the new event "SCSF" as successor of "SODR".
    o The new SCSF event should run at a less critical period after SoD.
    o <u>Analysis of the options:</u>
        ▪ At the End of SoD period, before NTS start → **Recommended**, since it is a less critical period, with no other processes running, minimising the risk of conflicts.
            - **Should succeed event SODR**, in order to not run in parallel with the processes triggered by SRR2 and SCST.
            - **Should not precede** any critical NTS events, allowing it to run without blocking the start of NTS in case it fails.
            - **Should precede the end of NTS (ENTS),** allowing it to complete before RTS.
        ▪ After NTS start (in parallel) → **Not recommended**, since it may conflict with system resources during other critical processes the NTS.
        ▪ After NTS, at the restart of RTS → **Strongly discouraged**, since it adds complexity and monitoring load, extending the settlement day.

Proposed change (TO BE)

- **Open issues/ questions to be clarified by the originator:**

Detailed assessment: