



EUROPEAN CENTRAL BANK

EUROSYSTEM

|  |  |                                      |
|--|--|--------------------------------------|
| <b>General Information (Origin of Request)</b><br><input type="checkbox"/> User Requirements (URD)<br><input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS) |  |                                      |
| <b>Request raised by:</b> Clearstream  | <b>Institute:</b> CSD  | <b>Date raised:</b> 21/09/2016       |
| <b>Request title:</b> Improvement of settlement data reporting during Start of day (SOD)   |  | <b>Request ref. no:</b> T2S 0634 SYS |
| <b>Request type:</b> Common  | <b>Classification:</b> Maintenance                                 | <b>Urgency:</b> Normal               |
| <b>1. Legal/business importance parameter<sup>1</sup>:</b> Medium  | <b>2. Market implementation efforts parameter<sup>2</sup>:</b> Low |                                      |
| <b>3. Operational/Technical risk parameter<sup>3</sup>:</b> Low  | <b>4. Financial impact parameter<sup>4</sup>:</b> Medium           |                                      |
| <b>Requestor Category:</b> CSD   | <b>Status:</b> Allocated to a Release                              |                                      |

#### Reason for change and expected benefits/business motivation:

During the first part of the Start of Day (SOD) period, when CRDM data get replicated on Settlement tables, T2S currently cannot provide settlement information regarding securities account positions and cash balances. This includes any account positions or balances required by query management. At night-time settlement (NTS) such A2A queries are queued during NTS sequences and provided once the sequence has been completed. During real-time settlement (RTS) they are provided without queuing. In U2A, these queries are only available in-between night-time settlement sequences.

The current implementation provides an ambiguous response when querying for securities account positions and cash balances during the first part of the SOD (replication period). In A2A, for example, the current response to a SecuritiesAccountPositionQuery (semt.025) during the SOD is a SecuritiesStatusOrStatementQueryStatusAdvice (sese.022) with the code X000 'No data found or no data found within the user's allowed data scope'. In U2A, the current response shows the empty list screen containing "No data found".

This ambiguity can be removed by making securities account positions and cash balances data available throughout the SOD period: the idea is that A2A and U2A queries can access EOD data of the previous business day during the replication period, and data for the current business day as soon as the replication is over.

Therefore, no ambiguous operational error message will be reported any more when accessing settlement data during the SOD.

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#### Description of requested change:

An evolution is required to make securities position and cash balance information available throughout the SOD (settlement replication period included). This new process will make available, first EOD data of the previous business day when CRDM data replication onto SETT tables is ongoing, then data for the new business day as soon as it is available.

More generally, preparation for the next business day will be anticipated so that no interruption takes place when querying settlement data during the replication process.

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<sup>1</sup> Legal/business importance parameter was set to Medium because with this change, the ambiguity with current "no data found" feedback will be removed, and the T2S Actor will always know whether there are really no positions within the query parameters, or whether there might be position but T2S would not display them in the timeframe between SOD and NTS

<sup>2</sup> Market implementation effort parameter was set to Low because the impact of this change will not require to invest huge resources in a testing campaign on the side of Participating CSDs, CBs and their communities

<sup>3</sup> Operational/technical risk parameter was set to Low because this change does not impact to any critical operational functionality.

<sup>4</sup> Low < 100kEUR < Medium < 500kEUR < High

Therefore, no ambiguous operational error message will be reported anymore when accessing settlement data during the SOD, whether through A2A or U2A requests.

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**Submitted annexes / related documents:**

CRG recommendation on the UTSG topic UT-PBR-073 (T2S returns no Settlement related data during Start-of-Day)

[https://www.ecb.europa.eu/pub/pdf/annex/UT\\_pbr\\_073\\_t2s\\_returns\\_no\\_settlement\\_related\\_data\\_during\\_sod\\_inc182133.en.pdf](https://www.ecb.europa.eu/pub/pdf/annex/UT_pbr_073_t2s_returns_no_settlement_related_data_during_sod_inc182133.en.pdf)

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**Proposed wording for the Change request:**

**UDFS for R2024.JUN**

Update of UDFS Section 1.4.4.1.1 page 162

**1.4.4.1.1 Application processes involved during the start of day**

The following application processes are involved during the SOD period as per:

- Interface;
- Static Data Management;
- Settlement;
- Liquidity Management;
- Information Management.

These application processes are available to all T2S Actors.

Note: During the Start of Day period, specifically when the CRDM data replication is ongoing on Settlement domain, queries sent in A2A mode requiring information from settlement are not queued and are answered with the securities positions, cash balances and limits utilizations data available at the End of Day of the previous business day.

The impacted queries requiring information from settlement are the following:

- Securities account position query;
- Securities Position Detailed Restriction Detail query;
- T2S Dedicated Cash Account cash balance query;
- T2S overall liquidity query;
- T2S cash forecast query;
- Limit utilisation query;
- Limit utilisation journal query;
- Total collateral value per T2S Dedicated Cash Account query;
- Collateral Value per T2S Dedicated Cash Account query;
- Collateral Value of a Security query;
- Outstanding Auto-Collateralisation Credit query;
- T2S Dedicated Cash Account Balance Detailed Restrictions query.

**Update of UDFS Section 1.6.4.5.2 Overview (Query Management)**

T2S provides a range of predefined query types from different categories (e.g. T2S Dedicated Cash Account queries, Securities Account queries, Settlement Instruction queries, static data queries, dynamic data queries), which the T2S Actor can use to request information on T2S business items, such as Liquidity Transfers, Securities Positions or Settlement Instructions and many more.

All user queries are available for all directly connected parties of T2S, such as CSDs and their participants as well as CBs and their participating Payment Banks.

They can send queries to T2S in A2A mode or in U2A mode. Generally, all queries are processed in real time. Exceptions occur during the maintenance window and during the night-time period. Queries sent in A2A mode during the maintenance window are queued and notice of the queued status is given immediately to the requesting T2S Actor. The query request is answered after the end of maintenance window. It is not possible to send queries in U2A mode during the maintenance window. Balance queries sent in A2A mode during sequences of the night-time period are queued and notice of the queued status is given immediately to the requesting T2S Actor. The query request is answered after the end of the sequence. It is not possible to send balance queries in

U2A mode during a sequence.

When the user queries the securities positions, cash balances or limits utilizations data during the Start of Day period, specifically when the CRDM data is being replicated in the Settlement domain, the query request is answered immediately with the securities positions, cash balances and limits utilizations data available at the End-of-Day of the previous business day. The queried data is available for the new business day during the Start of Day period, once the CRDM replication process has ended.

#### **UHB for R2024.JUN**

Update of UHB section 2.2.1.4 page 86

##### **2.2.1.4 Securities Restriction Details - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the securities restrictions data available at the End-of-Day of the previous business day is displayed on the screen. The securities restrictions data for the new business day is available as of the end of the CRDM data replication.

During night-time, the securities restriction details can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.2.2.15 page 169

##### **2.2.2.15 Securities Positions - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the securities positions data available at the End-of-Day of the previous business day is displayed at the screen. The securities positions data for the new business day is available as of the end of the CRDM data replication.

During night-time, the securities positions can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.2.2.16 page 174

##### **2.2.2.16 Securities Position – Details Screen**

This screen contains a number of search fields. By inputting the relevant data, you can search for maintenance securities instructions. The search results will be displayed in a list. After selecting an entry, you can proceed further by clicking on the buttons below.

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the securities positions data available at the End-of-Day of the previous business day is displayed at the screen. The securities positions data for the new business day is available as of the end of the CRDM data replication.

During night-time, the securities positions can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.1 page 324

##### **2.3.1.1 Cash Forecasts - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the cash forecast data available at the End-of-Day of the previous business day is displayed at the screen. The cash forecast data for the new business day is available as of the end of the CRDM data replication.

During night-time, the cash forecast can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.2 page 331

##### **2.3.1.2 Cash Forecasts – Detail Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the cash forecast data available at the End-of-Day of the previous business day is displayed at the screen. The cash forecast data for the new business day is available as of the end of the CRDM data replication.

During night-time, the cash forecast can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.3 page 337

#### **2.3.1.3 Cash Restriction Details - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the cash restriction details data available at the End-of-Day of the previous business day is displayed at the screen. The cash restriction details data for the new business day is available as of the end of the CRDM data replication.

During night-time, the cash restriction details can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.4 page 340

#### **2.3.1.4 Collateral Value of a Security - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the collateral value of a security data available at the End-of-Day of the previous business day is displayed at the screen. The collateral value of a security data for the new business day is available as of the end of the CRDM data replication.

During night-time, the collateral value of a security can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.5 page 344

#### **2.3.1.5 Collateral Value per T2S Dedicated Cash Account and Security - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the collateral value per T2S dedicated cash account data available at the End-of-Day of the previous business day is displayed at the screen. The collateral value per T2S dedicated cash account data for the new business day is available as of the end of the CRDM data replication.

During night-time, the collateral value per T2S dedicated cash account and security can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.8 page 348

#### **2.3.1.8 Limit Utilisation - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the limit utilisation data available at the End-of-Day of the previous business day is displayed at the screen. The limit utilisation data for the new business day is available as of the end of the CRDM data replication.

During night-time, the limit utilisation can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.9 page 352

#### **2.3.1.9 Limit Utilisation Journal - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the limit utilisation Journal data available at the End-of-Day of the previous business day is displayed at the screen. The limit utilisation Journal data for the new business day is available as of the end of the CRDM data replication.

During night-time, the limit utilisation journal can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.10 page 356

#### **2.3.1.10 T2S DCA Balances - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the cash balances data available at the End-of-Day of the previous business day is displayed at the screen. The cash balances data for the new business day is available as of the end of the CRDM data replication.

During night-time, the cash balances can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.1.11 page 360

#### **2.3.1.11 T2S DCA Balances – Details Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the cash balance data available at the End-of-Day of the previous business day is displayed at the screen. The cash balance data for the new business day is available as of the end of the CRDM data replication.

During night-time, the cash balances can only be displayed in-between night-time settlement sequences.

This screen is not relevant for CSD or CSD participant users.

Update of UHB section 2.3.1.13 page 368

#### **2.3.1.13 Total Collateral Value per T2S Dedicated Cash Account – Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the total collateral value per T2S dedicated cash account data available at the End-of-Day of the previous business day is displayed at the screen. The total collateral value per T2S dedicated cash account data for the new business day is available as of the end of the CRDM data replication.

During night-time, the total collateral value per T2S dedicated cash account can only be displayed in-between night-time settlement sequences.

The screen can be used in the following contexts:

Update of UHB section 2.3.2.6 page 391

#### **2.3.2.6 Outstanding Auto-Collateralisation Credits - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the outstanding auto-collateralisation credits data available at the End-of-Day of the previous business day is displayed at the screen. The outstanding auto-collateralisation credits data for the new business day is available as of the end of the CRDM data replication.

During night-time, the outstanding auto-collateralisation credits can only be displayed in-between night-time settlement sequences.

Update of UHB section 2.3.2.7 page 395

#### **2.3.2.7 Overall Liquidity - Search/List Screen**

During the Start of Day, when the CRDM data is being replicated in the Settlement domain, only the liquidity available at the End-of-Day of the previous business day is displayed at the screen. The liquidity data for the new business day is available as of the end of the CRDM data replication.

During night-time, the overall liquidity overview and detailed lists can only be displayed in-between night-time settlement sequences.

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**High level description of Impact:**

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**Outcome/Decisions:**

- \* CRG telco on 22 September 2016: The CRG agreed to share their feedback in a written procedure on the content of the Change Request and the urgency of implementation of the Change Request.
- \* CRG on 17 October 2016: During the written procedure from 10 - 17 October 2016, the CRG recommended to launch the preliminary assessment on the Change Request from 24 October 2016 to 15 November 2016 (batch 2).
- \* OMG on 08 November 2016: During a written procedure from 28 October - 08 November 2016, the Operations Managers Group did not identify any blocking operational impact of the Change Request.
- \* CRG telco on 16 November 2016: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment.
- \* CRG on 11 March 2022: The CR raiser decided to withdraw CR-634 while Clearstream decided to take full ownership of it.
- \* CRG on 25 April 2022: The CRG agreed to recommend CR-634 for authorisation by the T2S Steering Level.
- \*CSG on 13 May 2022: the CSG agreed to authorise CR-634
- \*NECSG on 13 May 2022: the NECSG agreed to authorise CR-634
- \*AMI-SeCo on 19 May 2022: the AMI-SeCo agreed with the CRG recommendation of CR-634for T2S Steering Level Authorisation
- \*MIB on 01 June 2022: the MIB agreed to authorise CR-634
- \*PMG on 14 December 2022: the PMG agreed to launch the detailed assessment of CR-634 with a view of scoping in Release R2024.JUN.
- \*CRG on 7 March 2023: The CRG agreed to approve the new wording of CR-0634 explaining the new approach to "Render Settlement Information during SOD" agreed in the CRG meeting on 18 January 2023.
- \*CRG on 27 April 2023: The CRG agreed to recommend to the PMG the inclusion of CR-0634 in the scope of R2024.JUN.
- \*OMG on 10 May 2023: the OMG identified no operational impact from the inclusion of CR-0634 in R2024.JUN.
- \*PMG on 11 May 2023: the PMG agreed to recommend the inclusion of CR-0634 in the scope of R2024.JUN.
- \*CSG on 23 May 2023: the CSG approved the inclusion of CR-0634 in the scope of R2024.JUN.
- \*NECSG on 23 May 2023: the NECSG approved the inclusion of CR-0634 in the scope of R2024.JUN.
- \*MIB on 30 May 2023: the MIB approved the inclusion of CR-0634 in the scope of R2024.JUN.

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**Preliminary assessment:**

[outdated]

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**Detailed assessment:**

| EUROSYSTEM ANALYSIS – GENERAL INFORMATION   |   |  |  |
|---|---|--|--|
| T2S Specific Components   |   | Common Components  |  |
| <b>LCMM</b>   |   |  |  |
|   | Instructions validation                       |  |  |
|   | Status management                             |  |  |
|   | Instruction matching                          |  |  |
|   | Instructions maintenance                      |  |  |
|   | Penalty Mechanism                             |  |  |
| <b>Settlement</b>   |   |  |  |
|   | Standardisation and preparation to settlement |  |  |
|   | Night-time Settlement                         |  |  |
| X   | Daytime Recycling and optimisation            |  |  |
| X   | Daytime Validation, provisioning & booking    |  |  |
| X   | Auto-collateralisation                        |  |  |
| <b>Liquidity Management</b>   |   |  |  |
| X   | Outbound Information Management               |  |  |
|   | NCB Business Procedures                       |  |  |
|   | Liquidity Operations                          |  |  |
| <b>T2S Interface</b> (as of June 2022 without Static Data Management, Communication for SDMG, Scheduler, Billing) |   | <b>Eurosystem Single Market Infrastructure Gateway</b> (from R6.0 June 2022) |  |
|   | Communication                                 |  | Communication  |
|   | Outbound Processing                           |  | Outbound Processing                                    |
|   | Inbound Processing                            |  | Inbound Processing                                     |
| <b>Static Data Management</b> (until June 2022)   |   | <b>Common Reference Data Management</b> (from R6.0 June 2022)                |  |
|   | Party data management                         |  | Party data management                                  |
|   | Securities data management                    |  | Securities data management                             |
|   | Cash account data management                  |  | Cash account data management                           |
|   | Securities account data management            |  | Securities account data management                     |
|   | Rules and parameters data management          |  | Rules and parameters data management                   |
| <b>Statistics and archive</b>   |   | <b>Statistics and archive</b>  |  |
|   | Statistical information (until June 2022)     |  | Short term statistical information                     |
|   | Legal archiving (until June 2022)             |  | Legal archiving (from R6.0)                            |
|   |   |  | Data Warehouse (from R6.0)                             |
| <b>Information</b> (until June 2022 containing reference data)  |   | <b>CRDM business interface</b> (from R6.0 June 2022)                         |  |
|   | Report management                             |  | Report management                                      |
|   | Query management                              |  | Query management                                       |
|   |   |  | Communication  |
|   |   |  | Outbound Processing                                    |
|   |   |  | Inbound Processing                                     |
| <b>Operational Services</b>   |   |  |  |
|   | Data Migration (T2S DMT)                      |  | Data Migration (CRDM DMT, from R6.0)                   |
|   | Scheduling (until June 2022)                  |  | Business Day Management (from R6.0)                    |
|   |   |  | Business Day Management business interface (from R6.0) |
|   | Billing (until June 2022)                     |  | Billing (from R6.0)                                    |
|   |   |  | Billing business interface (from R6.0)                 |
|   | Operational Monitoring                        |  | Operational and Business Monitoring                    |
|   | MOP Contingency Templates                     |  |  |

| Impact on major documentation  |   |   |
|--|---|---|
| Document   | Chapter   | Change  |
| Impacted GFS chapter   |   |   |
| Impacted UDFS chapter  | Update of UDFS Section 1.4.4.1.1                                | Application processes involved during the start of day                            |
|  | Update of UDFS Section 1.6.4.5.2                                | Overview (Query Management)   |
| Additional deliveries for Message Specification (UDFS, MyStandards, MOP contingency templates) |   |   |
| UHB  | Update of UHB section 2.2.1.4                                   | Securities Restriction Details - Search/List Screen                               |
|  | Update of UHB section 2.2.2.15                                  | Securities Positions - Search/List Screen   |
|  | Update of UHB section 2.2.2.16                                  | Securities Position – Details Screen  |
|  | Update of UHB section 2.3.1.1                                   | Cash Forecasts - Search/List Screen   |
|  | Update of UHB section 2.3.1.2                                   | Cash Forecasts – Detail Screen  |
|  | Update of UHB section 2.3.1.3                                   | Cash Restriction Details - Search/List Screen                                     |
|  | Update of UHB section 2.3.1.4                                   | Collateral Value of a Security - Search/List Screen                               |
|  | Update of UHB section 2.3.1.5                                   | Collateral Value per T2S Dedicated Cash Account and Security - Search/List Screen |
|  | Update of UHB section 2.3.1.8                                   | Limit Utilisation - Search/List Screen  |
|  | Update of UHB section 2.3.1.9                                   | Limit Utilisation Journal - Search/List Screen                                    |
|  | Update of UHB section 2.3.1.10                                  | T2S DCA Balances - Search/List Screen   |
|  | Update of UHB section 2.3.1.11                                  | T2S DCA Balances – Details Screen   |
|  | Update of UHB section 2.3.1.13                                  | Total Collateral Value per T2S Dedicated Cash Account – Search/List Screen        |
| Update of UHB section 2.3.2.6  | Outstanding Auto-Collateralisation Credits - Search/List Screen |   |
| Update of UHB section 2.3.2.7  | Overall Liquidity - Search/List Screen                          |   |
| Other impacted documentation (FA Sch. 05, FA Sch. 07)  |   | No impact   |
| Impacted GDPR message/ screen fields   |   | <b>No GDPR impact</b>   |
| Other  |   |   |



|                           |           |  |       |
|---------------------------|-----------|--|-------|
| documentations            |           |  |       |
| Links with other requests |           |  |       |
| Links                     | Reference |  | Title |

| OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT   |
|--|
| <b>Summary of functional, development, infrastructure and migration impacts</b>  |
| <ul style="list-style-type: none"> <li>- The screens displaying the securities positions, cash balances and limits utilizations must be updated. When the impacted screens are queried for the current business day during the period of the Start of Day when the event "Start of Day (STOD)" is running, these settlement data shall reflect the situation at the previous End of Day (the static data updates are not taken into account before the closure of the STOD event).</li> <li>- During that period, the screens displaying securities postings and cash postings will return an empty list when queried with the new business date, as no posting has been generated since the End of Day of the previous business date.</li> <li>- The error message specifying the unavailability of the screens during the start of day must be removed.</li> <li>- Test of all impacted screens at 4 specific points in time (before STOD, during STOD, after STOD, during a NTS sequence) in order to check if data are available or not and if data retrieved are the expected ones</li> <li>- Test of impacted screen after a Static data change between two business days</li> <li>- Testing the impacted queries (U2A &amp; A2A) in a non-regression testing campaign</li> <li>- Regression test of the impacted screens</li> </ul> |
| <b>Main cost drivers:</b>  |
| <ul style="list-style-type: none"> <li>- Screen updates</li> <li>- Screen testing (multiple scenarios based on several period of the BD, regression tests, etc.)</li> </ul>  |
| <b>Impact on other TARGET Services and projects</b>  |
| No impact on other TARGET Services   |
| <b>Summary of project risk</b>   |
| No risk on the stability or performance of T2S has been identified during the detailed assessment  |
| <b>Security analysis</b>   |
| No adverse impact has been identified during security assessment   |



25 April 2023

## Cost assessment on Change Requests

| <b>T2S-634-SYS – Improvement of settlement data reporting during Start of day (SOD)</b> |                     |            |      |
|---|---------------------|------------|------|
| One-off   | Assessment costs*   |            |      |
|   | - Preliminary       | 2,000.00   | Euro |
|   | - Detailed          | 10,000.00  | Euro |
| One-off   | Development costs   | 232,492.76 | Euro |
| Annual  | Operational costs   |            |      |
|   | - Maintenance costs | 23,299.85  | Euro |
|   | - Running costs     | 0.00       | Euro |

\*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).