

# NBB-SSS

## Information for DCP

Information document for stakeholders  
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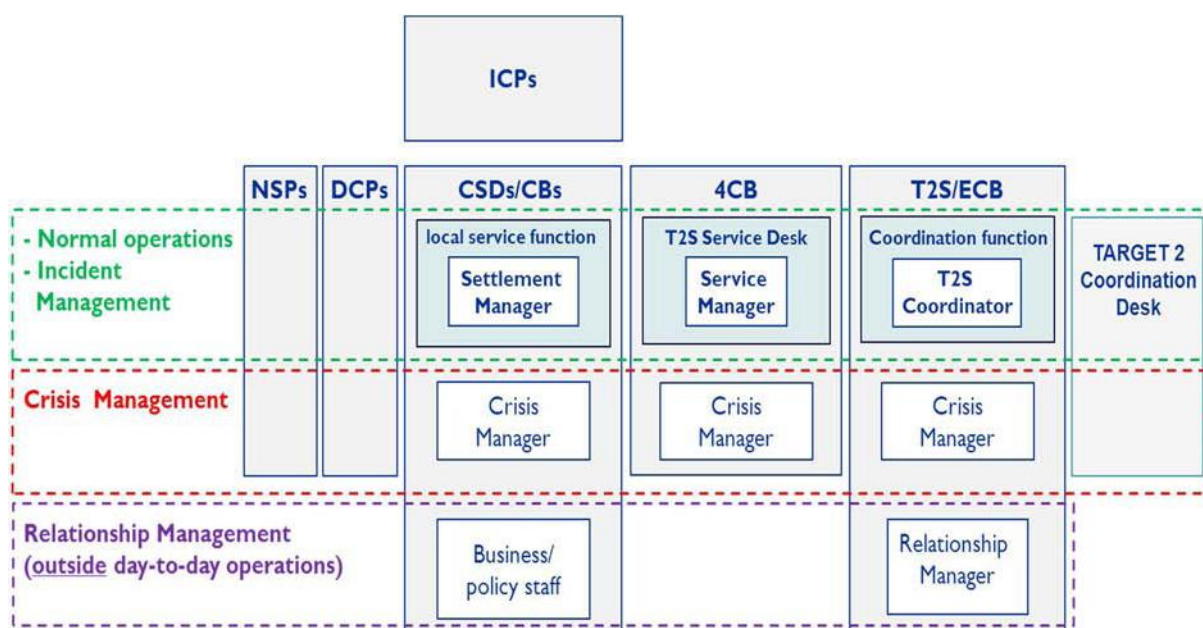
## 1 NBB-SSS INFORMATION FOR DCP

### 1.1 GENERAL

The NBB-SSS Information for DCP is a guide for T2S operational procedures which may involve the Directly Connected Parties (DCPs).

Such general communication with DCPs is under the control of CSDs, hence DCPs will receive fairly similar information from those CSD in which they maintain securities accounts.

### 1.2 OVERVIEW OF ROLES AND RESPONSIBILITIES OF T2S ACTORS



*Figure 1 - T2S Actors and other relevant players*

As each CSD and Central Bank remains fully responsible for the business relations with its respective participants, T2S has been designed in a way that allows the CSDs/ Central Banks to meet the administrative and regulatory requirements in terms of service monitoring and service control.

The CSD Settlement Managers are responsible for:

- ▶ all contacts with, and provision of business support to, their participants, including the management of the relevant Static Data;
- ▶ daily operational management;
- ▶ monitoring of the settlement activities of their participants (e.g. settlement flows) and the technical and operational monitoring of any local technical components;
- ▶ handling of local contingency arrangements and abnormal situations which are covered by this document and do not explicitly require the involvement of the Crisis Managers;
- ▶ close interaction with the T2S Coordination function and the T2S Service Desk.

The CSD Crisis Managers are called to deal with events which explicitly require their involvement or are escalated to them by the Settlement Managers. To address any unforeseen situation impacting T2S Operations, the 4CB Crisis Managers are reachable 24x7.

The T2S Service Desk at the so-called 4CB (four Central Banks which operate the T2S infrastructure on behalf of the Eurosystem) provides a single point of contact for the DCPs and the NSPs for handling all incidents, queries and requests concerning T2S operational, functional or technical issues. The role of the T2S Service Desk covers as well the authorisation of the subscription to the T2S Closed Group of Users (CGUs) of the licenced NSPs.

The T2S Service Desk is reachable over phone (different numbers for production and test services) and signed e-mail.

The signed e-mail refers to e-mails bearing digital signatures of authorised signatories for relevant functions. The e-mail used is similarly S-MIME (Secure Multipurpose Internet Mail Extensions) and /or TLS (Transport Layer Security) when communicating with other relevant T2S Actors. The digital signatures are done using certificates as issued by authorised Certificate Authorities<sup>1</sup>. The NBB-SSS RAMSES GUI certificates (Certification Authority Banco de España on behalf of ESCB PKI) can be used for this purpose.

All communication is conducted in English.

The standard response time (time from the start of the contact until logging in the TMS) during standard support hours is 15 minutes. Service Requests during non-standard support hours (signed e-mail only) are logged and answered during the standard support hours on the next T2S settlement day.

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<sup>1</sup> See the website of the European Commission, EU Trusted Lists of Certification Service Providers: <https://ec.europa.eu/digital-agenda/en/eu-trusted-lists-certification-service-providers>

The requests should be submitted to the T2S Service Desk by users authorised by the T2S Actors (excluding ICPs). Authorised users are entitled to contact the Service Desk. In case of doubt, the local help desk or the Settlement Manager of the relevant T2S Actor (excluding ICPs) can be contacted in order to verify the identity of the requestor or to check if the request is authorised.

Contact details T2S Service Desk for PRODUCTION environment:

[T2S@target-ssp.eu](mailto:T2S@target-ssp.eu)

Phone numbers: +4969968640266 or +390620663266

Contact details T2S Service Desk for TEST environments

[t2s-test@bancaditalia.it](mailto:t2s-test@bancaditalia.it) and [t2s-test@bundesbank.de](mailto:t2s-test@bundesbank.de) : use both in every e-mail !

Phone numbers: +49 69 968 640 222 or +390620663222

Players	Role	Availability	Type of support
<b>4CB</b>	T2S Service Desk T2S Service Manager	6:30 - 19:30 CET	On-site
<b>ECB</b>	T2S Coordination Function: T2S Coordinator	6:30 - 19:30 CET	On-site

*Table 1 - Support and availability of T2S Service Desk*

A DCP is a T2S User which is authorised by its CSD to access T2S directly for using T2S Services, i.e. without the need for the CSD to act as a technical interface. A DCP:

- ▶ subscribes the T2S Closed User Group (CGU) of one of the NSPs (SWIFT or SIA/Colt);
- ▶ communicates with T2S Platform via the Application-to-Application (A2A) and/or User-to-Application (A2A).

A DCP can participate in the T2S day-to-day operations as follows:

- ▶ All DCPs can contact the T2S Service Desk related to technical enquiries concerning their connection to T2S.

- ▶ A DCP can inform the T2S Service Desk directly if it faces incidents related to technical connectivity, which prevents the proper usage of T2S; the T2S Service Desk must then inform the relevant CSD without undue delay.
- ▶ In order to ensure smooth communication with DCPs, the CSDs shall provide the T2S Coordination function with contact details of their DCPs.
- ▶ DCPs are not directly involved in Incident and Crisis Management activities; it is for the respective CSD to ensure that the DCP is appropriately informed about on-going incidents and Crisis. They will be invited in Crisis Manager's conference call if related to the cause of the crisis.

### 1.3 COMMUNICATION TOOLS

The T2S Information System (T2S-info) provides up-to-date information on the operational status of the T2S Services to news agencies (such as Reuters, Bloomberg) and the T2S website. T2S-info informs about normal operations (start of day/end of day) and abnormal situations.

The T2S GUI allows the T2S Service Desk to send broadcast messages to the CSDs which in turn can also send broadcast messages to their DCPs.

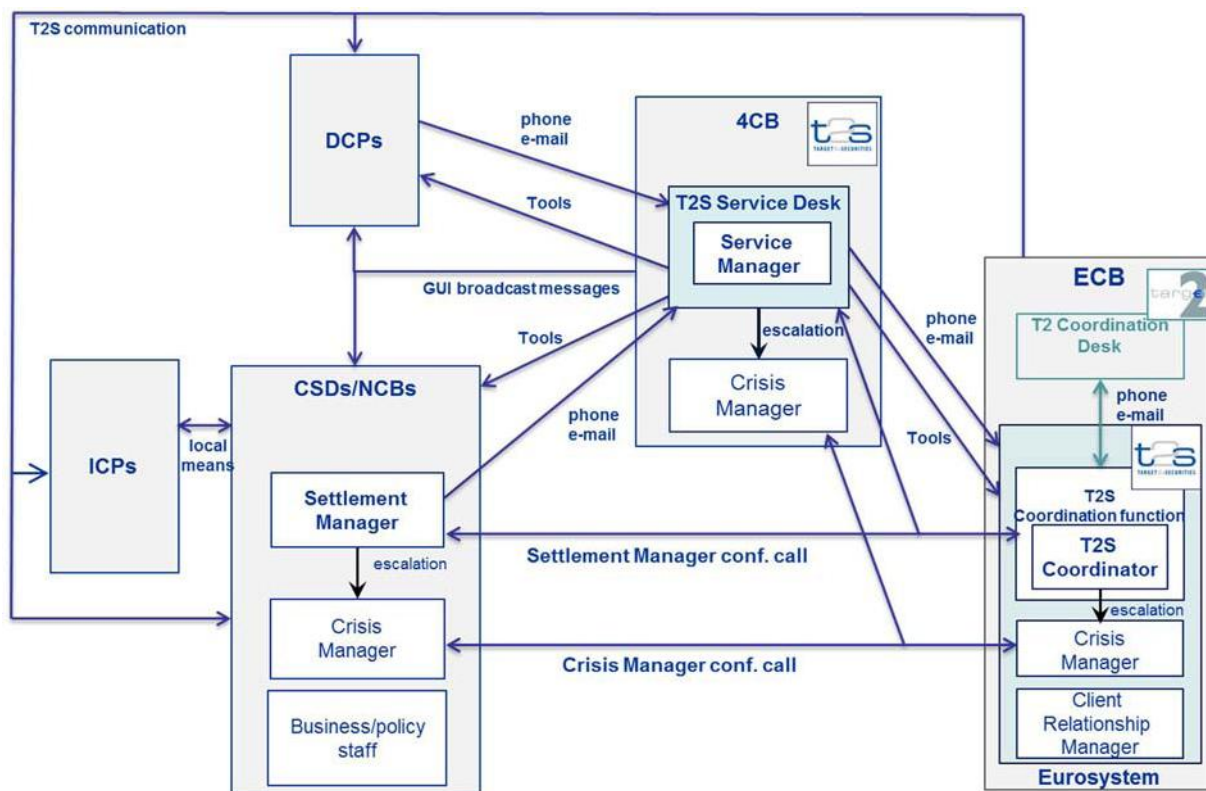
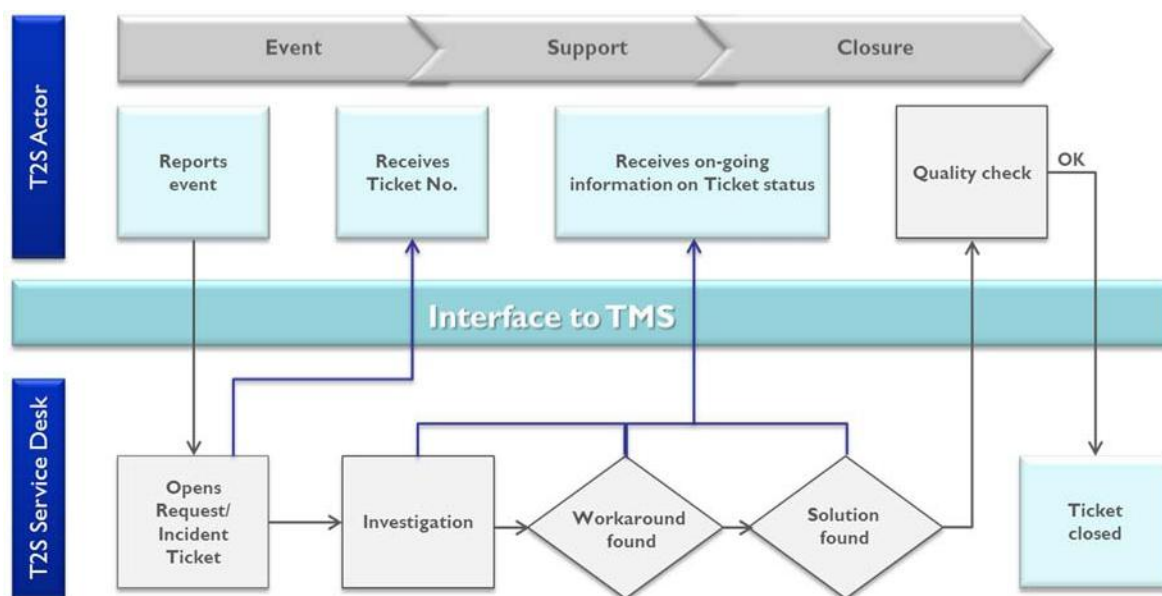


Figure 2 - Communication Tools Overview



The T2S Operational Directory is maintained on a secure part of the T2S website. It provides the current contact information for T2S Actors (excluding ICPs) as well as the T2S Service Desk and the T2S Coordination function. Changes are communicated by respective T2S Actors (excluding ICPs) to T2S Coordination function, who keeps it updated. Additionally, the T2S Coordination function revalidates the contact information every three months. The T2S Coordination function is in charge of maintaining the T2S Operational Directory and provides all T2S Actors (excluding ICPs) with passwords for accessing the secure Web pages.

The T2S Trouble Management System (TMS) supports most of the activities of the T2S Service Desk related to the Service Management processes. The T2S Service Desk uses the TMS to track all interactions (such as incidents, service requests) with CSD and Central Bank Settlement Managers as well as with the NSPs and DCPs.



*Figure 3 - TMS Overview*

The CSD and Central Bank Settlement Managers as well as DCPs have read access to the TMS through its Graphical User Interface (GUI).

## **2**                    **T2S SETTLEMENT DAY**

### **2.1**                    **INTRODUCTION TO THE T2S SETTLEMENT DAY**

T2S facilitates securities settlement in CeBM, according to the calendar of the relevant RTGS system. The T2S Operator maintains a T2S operating day calendar by currency, which includes the opening days and closing days for all T2S settlement currencies (see *UDFS V2.0 Section 1.4.1 - T2S Calendar*).

A detailed description of the T2S settlement day is available at *T2S UDFS V2.0, Section 1.4.4*. The tasks related to the T2S settlement day management, business and operations monitoring are described in the *T2S UDFS V2.0, Section 1.5.3 and 1.5.4*.

The T2S settlement day, i.e. Start of Day, Night Time Settlement, Maintenance Window, Real Time Settlement, and End of Day specific events from an operational point of view and generic procedures for T2S operations, are illustrated in this chapter.

The overview of the T2S settlement day is described in Figure 4, highlighting the key T2S activities and the key interactions between external systems (e.g. TARGET2) and T2S in different phases of the T2S settlement day. Key interactions included in the figure are those interactions that have a specific deadline. In case such a deadline is not met, it would affect the normal T2S settlement day, as described in the subsequent section.

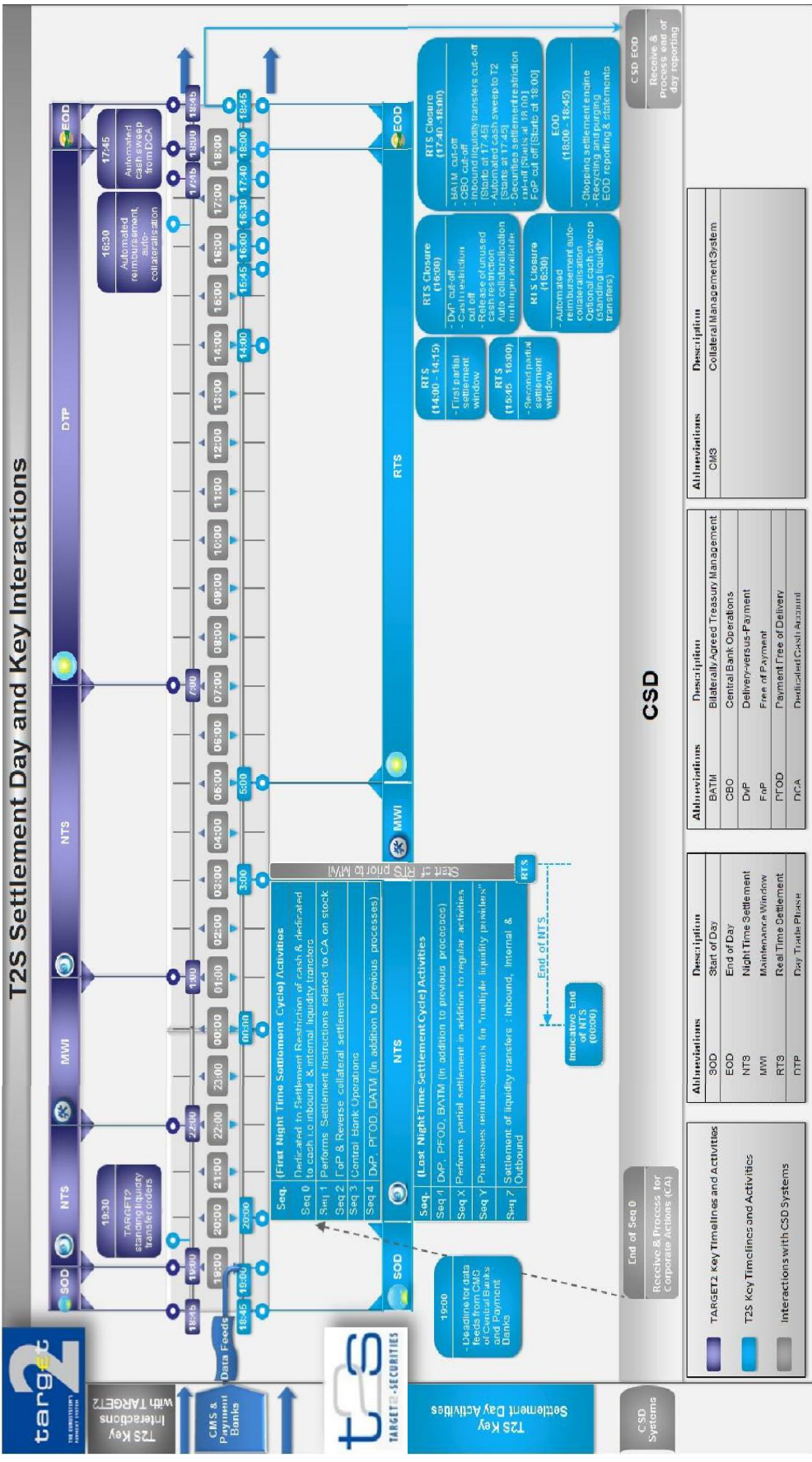


Figure 4 - T2S Settlement Day

## 2.2 T2S CHANGE OF THE SETTLEMENT DAY

The first action of the start-of-day process is the move to the next T2S settlement day according to the T2S Calendar, which occurs at **18.45 CET**.

On Fridays at **18:45 CET**, T2S moves the settlement date to the next T2S settlement day, i.e. Monday, and processing continues until Saturday at 03.00 CET. On Monday at 05:00 CET, T2S starts performing the schedule with the preparation of the real-time settlement as the continuation of the settlement day.

On the day before a T2S closing day, T2S moves the settlement date to the next settlement day (the first T2S settlement day after the T2S closing day, e.g. 2 January) and processing continues until 03.00 CET on the day of the T2S closing day. On the day after the T2S closing day at 05:00 CET, T2S starts the schedule with the preparation of the real-time settlement as the continuation of the settlement day.

## 2.3 T2S QUEUING DURING WEEKENDS AND T2S CLOSING DAYS

During weekends and T2S closing days, T2S interfaces and processes are unavailable due to the regularly executed technical maintenance activities, unless other planned activities take place (e.g. release deployments, business continuity tests). Therefore, T2S does not queue the messages. However, the Application-to-Application (A2A) communication will be queued by the NSPs until T2S is available again (*see Section Maintenance Window (03:00 CET – 05:00 CET)*).

## 2.4 SCHEDULE OF T2S SETTLEMENT DAY

The T2S settlement day is made up of a series of scheduled events. These events define the various processing steps and cut-offs, which are to be carried out during the system's operations. The default schedule for each settlement day is loaded automatically by the system upon each settlement date change on the basis of static data. The events which have to imperatively be triggered in the predefined sequence are linked to each other with a predecessor- successor relationship (*see T2S UDFS V2.0, Section 1.4.3*).

In case of an incident lasting through the settlement day occurs, it is possible to adjust the schedule and reschedule events following the Incident Management and/or Crisis Management procedures. The T2S Operator will implement changes manually on the current T2S settlement day schedule at runtime in exceptional situations.

The schedule of a T2S settlement day constitutes the major periods as listed below:

- ▶ start of day (SOD);
- ▶ night-time settlement (NTS);
- ▶ maintenance window (MWI);
- ▶ real-time settlement (RTS);
- ▶ end of day (EOD).

The following sections describe the procedural tasks during a normal operational day.

#### 2.4.1.1 Start of day (18:45 CET – 20:00 CET)

The SOD process is launched at **18:45 CET**. This is confirmed via the “Status of the T2S settlement day Notification” message, an entry in the T2S GUI “Daily Schedule” screen and “T2S Diary Response” query response message.

The SOD period includes:

- ▶ changing of settlement date in T2S;
- ▶ preparing the NTS:
  - Revalidating settlement and maintenance instructions that failed to settle or to be executed as of their Intended Settlement Date (ISD);
  - Accepting data feeds from Collateral Management Systems (CMS) and Payment/Settlement Banks received continuously throughout the day. However, 19:00 CET is the final deadline to accept data feeds (e.g. auto-collateralisation, client-collateralisation) effective for the current settlement date;
- ▶ Valuation of securities positions;
- ▶ Valuation of collateral eligible Settlement Instructions.

During this period settlement does not take place. This period is used by the T2S Actors (excluding ICPs) to prepare for NTS (e.g. corporate actions (CA) processing). Settlement instructions for processing in the NTS can be submitted during this period.

#### 2.4.1.2 Night-time settlement (20:00 CET– 03:00 CET)

The NTS starts after the successful completion of the SOD period and is followed by the MWI and the RTS periods. This is confirmed via the “Status of the T2S settlement day Notification” message, an entry in the T2S GUI “Daily Schedule” screen and the “T2S Diary Response” query response message (messages are available to the T2S Actors (excluding ICPs) upon subscription).

In case NTS completes before **03:00 CET** RTS begins immediately after the NTS completion, before the scheduled start of the MWI at **03:00 CET**. The target completion time of NTS is **00:00 CET**. The target completion time of the first NTS cycle is at **22:20 CET**.

During the NTS, T2S processes the settlement instructions, settlement restrictions and liquidity transfers in two settlement cycles, according to an automatic predefined order called “sequence”. A Settlement Cycle consists of more than one sequence (for settlement of different types of settlement instructions, settlement restrictions and liquidity transfers).

The NTS sequences in T2S include processing of

- ▶ new settlement instructions, settlement restrictions and liquidity transfers received before the start of the sequence which are eligible for settlement during this sequence (e.g. for the sequence 0 those received in T2S before **20:00**);
- ▶ pending settlement instructions not settled during previous sequences.

T2S validates and accepts the static data maintenance instructions and other maintenance instructions (e.g. cancellation instructions, amendment instructions or hold/release instructions) during the NTS period on a continuous basis. However, these updates are only processed in between the different sequences, unless these updates do not impact the settlement (see *UDFS V2.0, Section 1.6.3*). T2S sends the information on the status of the static data maintenance instructions and maintenance instructions immediately after the end of their processing (i.e. acceptance, execution).

For all static data updates, i.e. immediate updates and updates with future date, T2S also performs a validation of all settlement instructions and settlement restrictions to ensure that they are valid for the intended static data update.

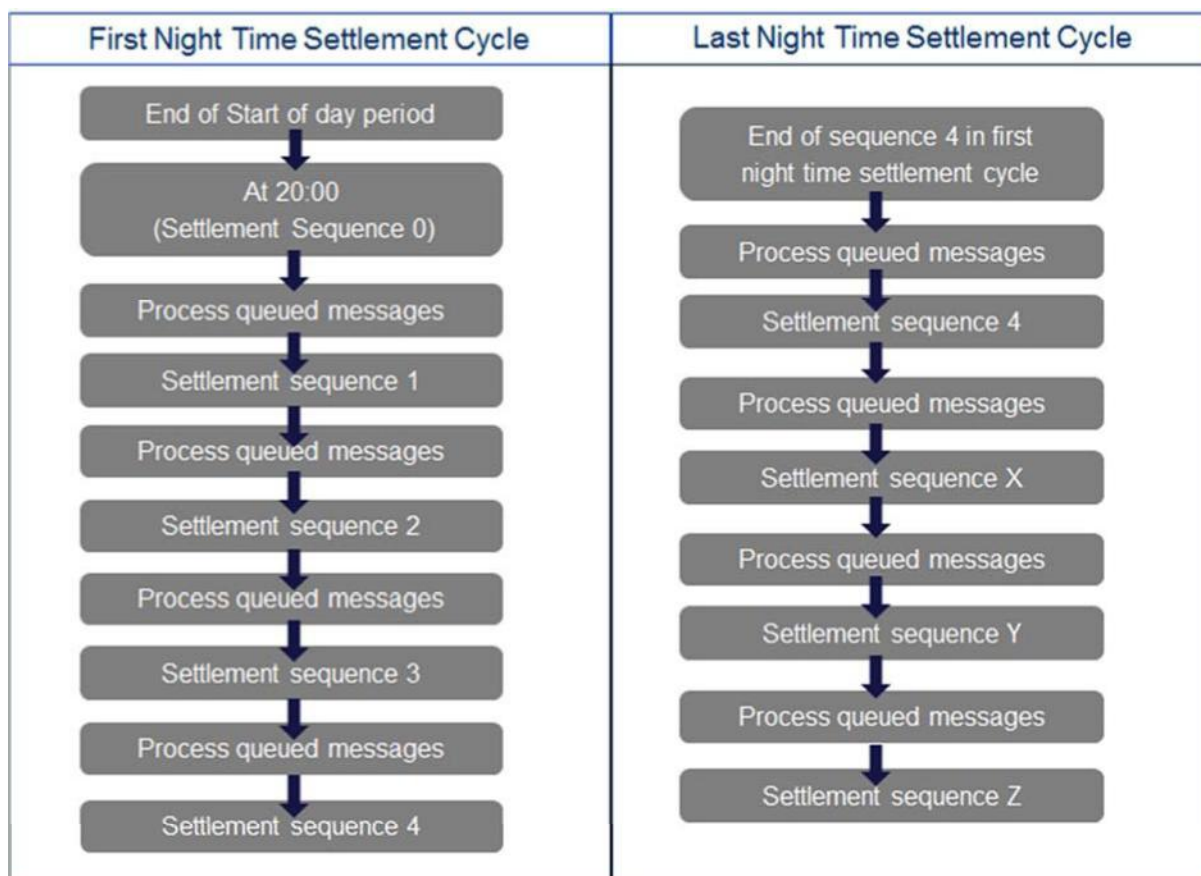
In case a maintenance instruction was created for a settlement instruction or a settlement restriction, but the underlying settlement instruction or settlement restriction has been cancelled during revalidation, the maintenance instruction execution will be denied, but the maintenance instruction will not be cancelled.

Queries related to securities positions and cash account balances, received and validated during a settlement sequence, are processed by the T2S with a query response back to the sending party after completion of the sequence. All other queries are processed immediately.

Once the processing of an NTS sequence is completed, T2S sends the messages that were queued during the execution of the settlement sequence, i.e. settlement advice, settlement confirmation, posting notification, etc.

At the end of each NTS sequence, T2S generates full or delta reports as per report configuration setup of the respective CSD, Central Bank or DCP.

During the NTS, T2S performs the processes in two different settlement cycles, as document in the following table.



*Figure 5 - T2S settlement cycles*

Generally, NTS sequences perform the same activities. However, certain sequences in the NTS are dedicated to specific activities and processing specific set of messages. These sequences are described below:

- ▶ Sequence 0 is dedicated to cash i.e. inbound liquidity transfers, internal liquidity transfers and other cash settlement restrictions. T2S reattempts the inbound liquidity transfers and cash settlement restrictions in subsequent sequences in case it is unable to process in sequence 0.
- ▶ Sequence 1 performs settlement of instructions related to CA on stock new liquidity transfers, new cash Settlement Restrictions and all cash Settlement Restrictions not settled in the previous sequence.
- ▶ Sequence X performs partial settlement in addition to regular activities. T2S applies partial settlement to all fails due to lack of securities or cash which are eligible for submission to partial settlement processing.

- ▶ Sequence Y processes reimbursements for “multiple liquidity providers”. This reimbursement procedure involves the execution of a series of outbound liquidity transfers from a DCA (of a payment/ settlement bank in T2S) to RTGS accounts in accordance to a pre-set sequence of reimbursement.

The end of the NTS is confirmed via an entry in the T2S GUI “Daily Schedule” screen and the “T2S Diary Response” query response messages, which are available to CSDs, Central Banks and DCPs upon request.

#### 2.4.1.3 Maintenance Window (03:00 CET – 05:00 CET)

The MWI is scheduled from 03:00 CET until 05:00 CET after the completion of the NTS period. The start of maintenance window is reported via “Status of the T2S settlement day Notification” (messages are available to T2S Actors (excluding ICPs) upon subscription).

During the maintenance window and with the exception of the T2S interface application process, all T2S processes are unavailable. The interface application process starts the queuing of all requests received in A2A mode. This is followed by a technical validation (i.e. format validation) of the incoming A2A store and forward messages (or files). The U2A communication as well as A2A real time messages are not queued during the MWI.

#### 2.4.1.4 Real-time settlement (05:00 CET – 18:00 CET)

The RTS starts after the end of the NTS<sup>2</sup> and is followed by the EOD.

The RTS period includes:

- I. Preparing the real-time settlement;
- II. Performing the real time settlement with the two partial settlement windows to optimise maximum value and volumes of settlement transactions;
- III. Closing the real time settlement with different cut-offs for settlement instructions, settlement restrictions and liquidity transfers categories.

#### **I. Preparing real-time settlement**

The start of the RTS is confirmed via the “Status of the T2S settlement day Notification” message, an entry in the T2S GUI “Daily Schedule” screen and “T2S Diary Response” query response messages, which are available to the T2S Actors (excluding ICPs) upon request.

T2S identifies and processes static data maintenance instructions received in the A2A.

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<sup>2</sup> Following the indicative timing for the completion of the NTS the start of RTS could be already at 00:00 CET.



T2S identifies new settlement instructions, maintenance instructions and liquidity transfers available for the current settlement day. T2S identifies all settlement and maintenance instructions, not settled and/or executed during the NTS period, and recycle them for RTS. The recycling takes place after the revalidation of the settlement instructions and settlement restrictions, subject to a static data change.

## **II. Performing the real-time settlement**

RTS attempts to process all new settlement instructions, maintenance instructions and newly received liquidity transfers intraday in T2S and all previous unsettled settlement instructions after the arrival of new securities and/or cash resources.

T2S also performs the execution of static data maintenance instructions. Additionally, T2S revalidates all settlement instructions and all settlement restrictions, subject to static data updates. Moreover, T2S generates reports triggered by business or time events.

The RTS also includes the following two partial settlement windows:

- ▶ First partial settlement window **(14:00 CET– 14:15 CET);**
- ▶ Second partial settlement window **(15:45 CET- 16:00 CET), 15 minutes before the beginning of the DVP cut-off time.**
  - During the partial settlement windows, T2S takes care of: Partial settlement of new settlement instructions arriving into T2S in this period, eligible for partial settlement.
  - Settlement of previously unprocessed or partially processed settlement instructions, eligible for partial settlement.

All processes available during the real time settlement are also available during both the partial settlement windows.

### III. Closing real-time settlement

The process starts after the completion of the second partial settlement window. It does not start before 16:00 CET. The following processes are executed sequentially:

TIME (CET)	T2S settlement day events / processes
16:00	DVP cut-off
16:00	Cash restriction cut-off
	Release of unused cash restriction
16:30	Automatic reimbursement
	Recommended: Optional cash sweep (standing liquidity transfers)
17:40	Bilaterally Agreed Treasury Management (BATM) cut-off
17:40	Central Bank Operations (CBO) cut-off
17:45	Inbound liquidity transfers cut-off
	Automated cash sweep
18:00	Securities restriction cut-off
18:00	FOP cut-off

*Table 2 - Sequential settlement day event*

The cut-offs are confirmed via an entry in the T2S GUI “Daily Schedule” screen and the “T2S Diary Response” query response messages, which can be available to the T2S Actors (excluding ICPs) upon request.

#### 2.4.1.5 End of day (18:00 CET – 18:45 CET)

T2S settlement day closes at **18:00 CET**. The EOD processing starts after the successful completion of the RTS period, when settlement no longer takes place. It is followed by the SOD period of the next settlement day.

Following the cut off and until **18:45 CET**, the following events take place:

- ▶ Stopping settlement engine;
- ▶ Recycling and purging;
- ▶ End of day reporting and sending statements.

T2S generates all the EOD reports as per the agreed prioritisation and sends them to the subscribing T2S Actors (excluding ICPs). The agreed prioritisation is:

- ▶ Statement of holdings
- ▶ Settled settlement instructions

- ▶ Pending settlement instructions
- ▶ Statement of Account
- ▶ Statement of Settlement Allegement
- ▶ Statement of settled intra-balance movements
- ▶ Statement of pending intra-balance movements

The execution of the EOD process is confirmed via the "Status of the T2S settlement day Notification" message, an entry in the T2S GUI "Daily Schedule" screen and "T2S Diary Response" query response messages, which are available to the T2S Actors (excluding ICPs) upon request.

### 3 OPERATIONAL ISSUES AND APPLICABLE OPERATIONAL PROCEDURES

This section maps operational issues and related applicable operational procedures, and subsequently describes the operational procedures in detail. The application of such operational procedures is triggered via Incident and /or Crisis Management.

T2S settlement day consists of established processes and activities. Table 3 provides a non-exhaustive overview of possible operational issues during the different periods of the T2S settlement day with the mapping to the applicable operational procedure.

#	Phase	Key Activities	Relevant Operational Issues	Applicable Operational Procedures
1	SOD 18:45CET – 20:00 CET	Change of settlement date in T2S	RTGS not able to start new settlement day	Delay start of D + 1 settlement day in case of RTGS delay
		Preparation for Night Time Settlement	CMS data feed unavailable in T2S by 19:00	Processing of the CMS data feed
			T2S Platform failure does not allow SOD	<b>Error! Reference source not found.</b>
			CMS unable to update auto-collateralisation limit	<b>Error! Reference source not found.</b>
			T2S revalidation of instructions against Static Data updates leads to unexpected results	<b>Error! Reference source not found.</b>
			One or more T2S Actors' impossibility to access T2S	<b>Error! Reference source not found.</b>
2	NTS 20:00 CET– 03:00 CET	First night time cycle with reporting and processing of Static Data maintenance instructions at the end of each sequence	T2S has a delay to start the Night Time Settlement	<b>Error! Reference source not found.</b>
			T2S has not received the liquidity transfers	T2S processing with limited liquidity
			CSD/ Central Bank request delay (later start of NTS)	<b>Error! Reference source not found.</b>
		Last night time cycle with reporting and processing of Static Data maintenance instructions at the end of each sequence, including partial settlement	One or more T2S Actors' impossibility to access T2S	<b>Error! Reference source not found.</b>

#	Phase	Key Activities	Relevant Operational Issues	Applicable Operational Procedures
3	MWI 03:00 CET – 05:00 CET	MWI	System maintenance delay	<b>Error! Reference source not found.</b>
4	RTS 05:00 CET – 18:00 CET	RTS	RTGS failure	T2S processing with limited liquidity
			General network failure	<b>Error! Reference source not found.</b>
			One or more T2S Actors' impossibility to access T2S	<b>Error! Reference source not found.</b>
			T2S is down close to (e.g. half an hour or 15 minutes before) the start of the cut-offs	<b>Error! Reference source not found.</b>
			Reception of big volumes during real time (special sub-case when the volumes arrive just before the related cut-off)	Night-time algorithms processing during RTS
		Real Time Settlement closure	Delay in DVP cut-off	<b>Error! Reference source not found.</b>
			Delay in automatic reimbursement (rebalancing and/ or relocation)	<b>Error! Reference source not found.</b>
			Delay in other cut-offs	<b>Error! Reference source not found.</b>
			Delay in automated cash sweep	<b>Error! Reference source not found.</b>
			Request for T2S delayed closing	<b>Error! Reference source not found.</b>
		Stop settlement engine	T2S failure in EOD procedures	<b>Error! Reference source not found.</b>
		Recycling and purging		
5	EOD 18:00 CET – 18:45 CET	End of day reporting and statements	CSD identifies an issue while reconciling the statement or processing its CA	<b>Error! Reference source not found.</b>
			RTGS (e.g. TARGET2 for the euro) delayed closure of their settlement day (D)	Delay start of D + 1 settlement day in case of RTGS delay
			One or more T2S Actors' impossibility to access T2S	<b>Error! Reference source not found.</b>

Table 3 - Operational Issues and Procedures

### 3.1 DELAY START OF D + 1 SETTLEMENT DAY IN CASE OF RTGS DELAY

#### **Issue Description**

The RTGS system (e.g. TARGET2) either (i) has not yet closed its previous business day due to a delay or due to some unexpected incapability<sup>3</sup> or (ii) is not capable of starting the new business day.

#### **Issue Resolution**

If the RTGS Operator (TARGET2 Coordinator) realises that it is not possible to close the RTGS system in time or the RTGS system is not able to change to the next business day, then the RTGS Operator will immediately inform the T2S Coordinator. The T2S Coordinator initiates the T2S Incident Management process.

T2S settles against cash on DCAs that receive funds from RTGS accounts. At the end of the day, liquidity is reimbursed to these RTGS accounts. Moreover, T2S is supporting auto-collateralisation features in a fully harmonised way, allowing settlements to take place without injecting additional cash.<sup>4</sup>

In case of a RTGS delay, T2S Operator following Incident/Crisis Management can either (i) delay the start of settlement of the given currency in T2S for the next T2S settlement day, (ii) delay the start of T2S, or (iii) start the normal T2S processing, including for the currency of delayed RTGS system

The T2S decision depends on different aspects such as:

- ▶ reason (technical or operational) and status (is the current business day closed or not) for the RTGS delay;
- ▶ expected duration of the RTGS delay;
- ▶ expected liquidity situation;
- ▶ impact of prolonged T2S delay or T2S start on financial stability and financial markets.

In case the RTGS has not yet closed the current business day, the preferred solution is (i) to delay the start of settlement for the delayed currency or ii) to delay the start of T2S for the next T2S

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<sup>3</sup> The relevant TARGET2 procedures are described in the Information Guide for TARGET2 users.

<sup>4</sup> It should be noted that the collateralisation techniques and the set-up for auto-collateralisation is not uniform among the central banks.

settlement day. To prevent the currency from settling on the DCAs for the next T2S settlement day a specific restriction on the Party Central Bank will be set.<sup>5</sup>

Alternatively, specifically when the RTGS has closed the current business day, it will be possible to start settlement for the next T2S settlement day in T2S without liquidity and rely on auto-collateralisation.

### 3.2 PROCESSING OF THE CMS DATA FEED

#### **Issue description**

The data feed for the list of eligible collateral and collateral valuation prices from the Collateral Management Systems (CMSs) is not available at 19:00 CET.

Central Banks that offer auto-collateralisation and Payment Banks that offer client-collateralisation in T2S are responsible for the setup and maintenance of the auto-collateralisation feature in T2S, including the configuration of static data. This information (data feed) will be provided directly via the respective CMS.

The CMS data feed related to the list of eligible securities for auto-collateralisation is communicated by the CMS to T2S when changes occur. With regards to the valuations of the eligible securities, the valuation is expected to be provided to T2S on a daily basis. CMS data feeds (complete set of securities valuation coefficient, delta of eligible assets, and eligible links) can be provided throughout the day; however, the data for the respective settlement day is only activated at 19:00, during the Start of Day processes.

Once the preparation of the Night-Time Settlement starts during the Start of Day process, T2S performs a check to confirm that CMS data feeds, effective for the current settlement day, have been processed in T2S. A check is also performed to confirm that for each eligible security for auto-collateralisation a valuation has been provided to T2S.

The unavailability of the data could be because:

- ▶ CMS data feeds are not yet received by T2S;
- ▶ Data feeds supplied by CMSs are not valid (i.e. cannot be processed by T2S);
- ▶ CMSs supplied the data feed before 19:00 but they are blocked at the T2S Interface.

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<sup>5</sup> The restriction applies to all the currencies associated to the Central Bank.

### **Issue resolution**

In case of unavailability in T2S of the necessary data feeds from one or several CMSs, as a general procedure, the settlement day processing is blocked and a predefined alert is raised to the T2S Service Desk. The T2S Service Desk manually resumes the T2S settlement day allowing the system to use the previous available data for the missing valuation of eligible securities<sup>6</sup> unless the NCB (its own or on behalf of their Payment Bank) triggers Incident Management process.

In case the issue is on the side of T2S and there is a risk that the prices are not processed in time, the T2S Service Desk will contact the involved Central Bank(s) to ask for an authorisation to proceed with the operational day.

If there is a need to wait for the missing data feeds (e.g. because certain assets need to be deleted or a workaround is needed), the T2S delay procedure will be activated.

### 3.3 NIGHT-TIME ALGORITHMS PROCESSING DURING RTS

#### **Issue description**

There is abnormally low successful settlement rate during NTS.

#### **Issue resolution**

When the number of transactions might overload the RTS Algorithms' capability to process all the transactions a technical analysis is performed and the T2S Service Manager may propose to run the OBM (Optimisation Batch Manager). The OBM is a special algorithm to manage unexpected high volumes during RTS to increase the number and value of transactions settled in T2S.

- ▶ The T2S Service Manager will initiate the Incident and Crisis Management process. A Settlement Managers' conference call will be initiated to inform the Settlement Managers<sup>7</sup> about the possibility to run an OBM and to agree on the timing.
- ▶ A broadcast via T2S GUI will be sent to all T2S Actors (excluding ICPs) in order to inform about the changed settlement pattern and to ensure provisioning of sufficient resources. The T2S Operator starts the OBM at the agreed time, closely monitors the situation and informs the T2S Coordinator if the situation is resolved.
- ▶ After the volumes are normalised, according to the standard Incident Management process, the T2S Service Manager will inform the T2S Coordinator about the situation who will initiate a Settlement Managers' conference call followed by Crisis Managers' conference call (if deemed necessary) in order to decide to de-activate the OBM and to proceed with normal processing.

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<sup>6</sup> Alternatively some workarounds can be applied e.g. setting zero price for unavailable data, manually revoking eligibility prior to 19:00, manually setting the auto-collateralisation limits to zero, or restricting the provision of auto-collateralisation.

<sup>7</sup> The view of the TARGET2 Coordinator should be taken into account as the business day phase of TARGET2 and liquidity aspects may play a role in the decision-making.



- ▶ A broadcast via T2S GUI to all T2S Actors (excluding ICPs) is sent accordingly.

### 3.4 T2S DELAY

#### **Issue description**

During the T2S settlement day different situations may occur which require the postponement of one or more phases of the T2S settlement day or even a delay of the closure of the settlement day. This may, on the one hand happen in case T2S itself is, due to different reasons (e. g. a software bug), unable to continue with the phases of the T2S settlement day as scheduled. On the other hand, also issues outside T2S may impact the T2S Schedule.

The following non-exhaustive list of causes might lead to a delay:

- ▶ T2S failure;
- ▶ settlement and liquidity management services failure;
- ▶ static data services failure;
- ▶ information services failure;
- ▶ connectivity services failure;
- ▶ CSD failure;
- ▶ RTGS failure;
- ▶ CMS services failure;
- ▶ Other reasons.

#### **Issue resolution**

#### **IV. Overview**

The decision to delay the start of the night time settlement phase or to postpone any other phase of the T2S settlement day is always made by the Crisis Managers. A delayed closing is requested to T2S Service Desk and the T2S Coordinator is informed by the T2S Service Desk. The T2S Coordinator will initiate a Settlement Managers' conference call to inform about the request and to schedule a Crisis Managers' conference call immediately. The Crisis Managers shall decide on T2S delay at the latest 15 minutes before the cut-off time.

In case of a T2S failure that triggers the failover to another site or region, there is no other possibility than to wait until the platform recovers and to delay the closing/ postponing the phase. Meanwhile, the Crisis Managers will be informed.

The T2S Coordinator shall inform the T2S Actors as early as possible about the possible duration of the delay/ postponement. As long as this cannot be anticipated, regular updates of the situation will be provided.

#### **V. Timing of the decisions**

Decisions on delays and/or postponement of cut-offs shall be taken as early as possible to reassure the markets that they have sufficient time to process all their business.

The first information is exchanged at the Settlement Manager level together with the collection of facts. Due to a possibly tight time frame it is of extreme importance that the conference calls (information collection and impact analysis) are done in a structured way.

#### **VI. Collection of information**

The information about the incident and when possible the impact shall be collected at the level of the Settlement Managers.

Collection of information during Settlement Managers' conference call should ideally (i.e. if known at this point in time, lack of known information must not delay the process here) comprise:

- ▶ short description of the event including a clear request for a delayed closing;
- ▶ expected time required (how long to delay);
- ▶ impact on CSDs/ Central Banks with values and volumes at stake;
- ▶ special days in CSDs' business (e.g. end of year, special CA processing);
- ▶ impact on TARGET2 and other RTGS systems (incl. mentioning of special days like end of minimum reserve period, end of quarter).

Information not available at the time of the Settlement Managers' conference call, but likely to be there when the Crisis Managers have their conference call shall be clearly identified and mentioned.

The acceptance or rejection of a request for delay by the Crisis Managers is based on the following criteria:

- ▶ time of the day;
- ▶ length of the delay;
- ▶ possible systemic impacts if the delay is not accepted or if the delay is accepted.

In the event of a T2S failure, there is no alternative but to wait for the recovery of the T2S Platform and to provide the necessary time for the CSDs and Central Banks to finish their processing.

At the end of the conference call, the T2S Coordinator will summarise the conclusion of the conference call preferably with an agreed recommendation to be presented for decision to the Crisis Managers, with the following structure:

- ▶ reason for the delay;
- ▶ impact of the delay;
- ▶ proposal to accept or reject the request;
- ▶ impact in case of rejection;
- ▶ available options and impact in case of acceptance.

Immediate after the Settlement Managers' conference call, the Crisis Managers' conference call will be initiated, and the Crisis Management process applies.

#### **VII. Minimum length of the T2S Settlement Day and minimum duration of the operational day phases**

In order to help the evaluation of the impact of a delay and to speed up the decision making it is useful to identify the minimum duration of each phase and, consequently, the minimum duration of a whole settlement day. The following table illustrates for each main phase of the T2S settlement day the standard times and the minimum times needed to complete the activities from T2S and from CSD/ NCB side.

T2S settlement day phase	Standard time	Minimum duration (indicative)
Start of Day (18:45 to 20:00)	75 minutes	75 minutes
Night Time Settlement (20:00 to 3:00)	7 hours	4 hours
Maintenance Window (3:00 to 5:00)	2 hours	0
Real Time Settlement (first part 5.00 to 16.00)	11 hours	4 hours
Real Time Settlement (second part 16.00 to 18.00)	2 hours	2 hours
End of Day (18:00 – 18:45)	45 minutes	45 minutes
Total	24 hours	12 hours

*Table 4 - Minimum Duration of Each Phase and Minimum Time to Complete Activities*

The table is a tool in the hand of the T2S Coordinator and the CSD's/ Central Bank's Settlement Manager and Crisis Managers to quickly evaluate the impact of a delay on the operational day. For example after a recovery of the T2S Platform the information present in the table will help to identify how much time would be needed to complete the settlement day without delaying of the EOD/ SOD, or in case of prolonged outage what is the impact on the following settlement day. Tools will be available to the participants of the Settlement Managers' and Crisis Managers'

conference call to visualize the effect of the delay on the current and following T2S settlement days and on the interconnected systems.

### **VIII. Prolonged T2S outage**

Such scenario covers the unlikely situations that, despite all the efforts (normally after several subsequent delays) T2S cannot start the new T2S settlement day without impacting the timely closure of the next T2S settlement day. As, declaring the next day as non T2S settlement day, would cause the system to reject instructions with that Intended Settlement Date, the only solution is to run one or more “special” T2S settlement days skipping the maintenance window and where possible reducing the duration of certain settlement phases to catch up with the processing and to resume the normal settlement day as soon as possible. For such decision the Crisis Management process will be followed.

### 3.5 T2S PROCESSING WITH LIMITED LIQUIDITY

#### **Issue description**

A situation might occur that while T2S is able to open and start the settlement day, no or only some liquidity transfers have been received. This situation can occur due to the following reasons:

- ▶ RTGS is running, but there is a failure of liquidity transfer processing in the RTGS;
- ▶ failure of communication between the RTGS system and T2S ;
- ▶ RTGS had closed the previous business day for payment processing (and T2S has opened), however, the RTGS has a failure during its subsequent phases i.e. Start of Day, Night Time Settlement, or Real Time processing.

Any of the above failures affect the Inbound Liquidity Transfers (from an RTGS account to a DCA) which are initiated in the relevant RTGS System and cannot be triggered in T2S. It concerns Immediate, Predefined and Standing Liquidity Transfer Orders equally, which execution is possible during the NTS sequences and the RTS period.

#### **Issue resolution**

If only some Liquidity Transfers are missing, the T2S Operator monitors and checks the issue with the RTGS Operator and the relevant T2S Actors (excluding ICPs).

T2S can settle without injecting additional cash due to its auto-collateralisation features. Therefore, in case of an RTGS failure, T2S can continue processing without RTGS liquidity provision or with limited liquidity available from auto-collateralisation and settle FOP transactions. The Incident Management will be launched and a Settlement Managers’ conference call will be initiated on the T2S side whereas the RTGS Operator will monitor and handle the failed Liquidity Transfers, and initiate its own contingency measures.

If disruption in the RTGS System is so severe that it cannot be solved for a prolonged time and the liquidity situation is not expected to improve in the T2S system, the T2S Crisis Managers may decide to delay the actual settlement phase in T2S.

### 3.6 OPENING T2S ON WEEKENDS FOR SETTLEMENT

#### **Description**

In addition to the procedure to open T2S during weekends for trial purposes (i.e. business continuity related tests), in specific situations T2S could be opened during a weekend for settlement in the following cases:

- ▶ A large issuance in a direct holding country;
- ▶ Major releases deployment on the side of the CSDs and Central Banks ;
- ▶ Major T2S release deployment.

The purpose of requesting T2S to open during weekends for settling real instructions (i.e. no code words required) allows to identify and solve potential problems (in case of a release deployment) or settle potential large volumes (e.g. large issuance in a direct holding country) on Saturday instead of Monday morning.

T2S would be open for these activities and would provide all services as available on a normal settlement day, except liquidity transfers as the RTGS systems would not be available at that time. Transactions executed during the weekend activities would have a settlement date of Monday since they are executed after the Start of Day event.

The above listed activities are expected to be performed outside the Maintenance Window of the NSP, which has a different duration across weekends (as a standard from 17:00 CET on Saturday to 08:00 CET on the following Sunday). In case this is not feasible, a request should be sent to the NSPs following the rules defined in the NSP's User documentation.

#### **Operational procedure**

Two different options are available to open T2S for settlement during weekend:

- ▶ The NTS cycles are completed and T2S would open for RTS settlement on Saturday after a shortened Maintenance Window (MWI) at a time to be agreed on a case by case basis depending on the activities to be concretely performed as well as on the duration of the release and deployment management activities. In such case the RTS would remain open until Monday at 5:00 (normal RTS beginning after the week-end) and even continues until Monday start of EOD;

- ▶ The T2S Start of Day event (standard time 18:45) and the following NTS and MWI phases are postponed to Saturday morning. They will start after the T2S or CSD and/ or NCB major release deployment phase is completed

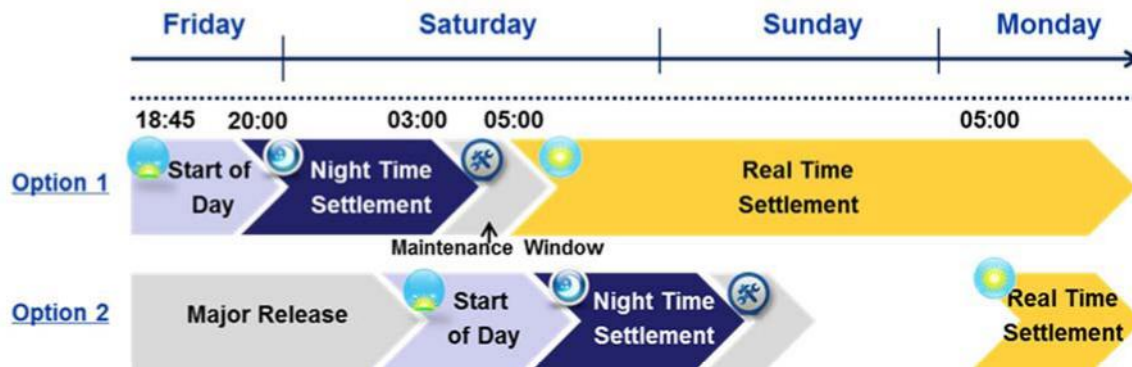


Figure 6 - T2S Operation during Weekend for Settlement

Regarding option 1 the request to open T2S during weekends for settlement is submitted to the T2S Service Desk via e-mail at least three months in advance. The T2S Service Desk will inform the T2S Coordinator accordingly. After the feasibility check, the agreement is requested from the whole community via e-mail to Settlement Managers. The Settlement Managers can provide agreement/ disagreement within next 5 days. Only in case of need (e.g. diverging views or different organisational needs to be accommodated) a Settlement Managers' conference call will be organized.

Option 2 is planned in advance according to the T2S release plan that includes time plan of major releases from CSDs and Central Banks.

### 3.7 TECHNICAL DISCONNECTION OF A PARTICIPANT USING ABNORMALLY THE SYSTEM

#### **Description**

T2S Actors (excluding ICPs), accessing the T2S Platform through NSPs, are registered in the CGU. The CGU shall restrict access to the connectivity services only to the identified and authorised users. The registration process to the CGU is arranged via the NSP.

T2S has implemented a number of technical measures to avoid that abnormal behaviour of a T2S Actor (excluding ICP) in the technical infrastructure or application can hamper the stability of the system or have an impact on other users.

## **Operational Procedure**

In the unlikely event that the measures referred above are not effective and there is evidence that the system's integrity is at stake, the T2S Service Desk shall:

- ▶ Contact the concerned T2S Actor (excluding ICPs), asking them to stop the abnormal behaviour without delay;
- ▶ Verify, in cooperation with T2S Actor (excluding ICPs) and the NSP, if technical measures on T2S' or NSP's side are available to return to a normal situation;
- ▶ Ask the NSP to withdraw the involved T2S Actor (excluding ICPs) from the CGU in case the threat to the stability of the platform with impact on other service users is still present and no other measures have been proven effective.

The T2S Coordinator is informed and a Settlement Managers'/ Crisis Managers' conference call is initiated prior to withdrawal of the CSD/ Central Bank or DCP.

The T2S Coordinator, in accordance with the Article 36 of the FA, will consult the Relevant Competent Authorities.

The NSP shall withdraw the T2S Actor(s) (excluding ICPs) from the CGU within one hour. The withdrawal can be requested for the U2A access, the A2A access, or both depending on the nature of the incident.

The suspension from the CGU remains effective until the T2S Actor (excluding ICP) has declared to the T2S Service Desk that the threat no longer exists.

### 3.8 BLOCKING ONE OR MORE PARTY TECHNICAL ADDRESSES TO KEEP T2S OUTGOING MESSAGES ON HOLD

#### **Issue description**

The Party Technical Address (PTA) is the parameter allowing each T2S Actor (excluding ICPs) directly connected to T2S to receive messages from the T2S central application. After the definition, each PTA has to be linked to the relevant network services(s).

If at any moment during the settlement day the T2S Actor (excluding ICPs) experiences disturbances at the level of its local application interfacing T2S, this T2S Actor might require to temporarily block some or all the messages T2S is sending. Needless to say, should the T2S Actor (excluding ICP) be in a position to intercept its incoming messages before they reach their local application or any other way to avoid interferences in its incident resolution procedures, the below described procedure does not need to be activated.

### **Operational procedure**

At any moment during the settlement day, a T2S Actor (excluding ICP's) directly connected to T2S can request the T2S Service Desk to intraday temporarily block one or more of its PTAs;

- ▶ Such request has to be provided via signed e-mail listing all the PTAs whose temporary blockage is being requested;
- ▶ The T2S Service Desk treats the request immediately;
- ▶ After the provisional blockage is implemented, the T2S Service Desk sends a return signed e-mail to the requesting T2S Actor (excluding ICPs) to confirm the execution;
- ▶ The messages whose routing normally happens through the blocked PTAs are held at the level of the central T2S application. They are anyway visible via the standard screens.

Once the requesting T2S Actor (excluding ICPs) decides the messages holding is no longer necessary:

- ▶ It sends another signed e-mail to the T2S Service Desk as a reply to the latter's confirmation to the original request, where the unblocking of the PTAs is requested;
- ▶ A partial unblocking is also possible. In such case, the list of the ones to be unblocked has to be clearly and explicitly provided. Failing such detail, all the previously blocked PTAs are unblocked;
- ▶ After the T2S Service Desk executes the partial or complete unblocking request, it returns via signed e-mail to the requesting T2S Actor (excluding ICPs) to confirm the unblocking is done;
- ▶ The held messages are released and from that moment the normal process is restored.

### 3.9 HANDLING OF INFORMATION SECURITY EVENTS (E.G. CYBER-ATTACK)

#### **Description**

Information Security management is not static. The business environment is constantly changing and new threats and vulnerabilities can occasionally emerge. Systemically important financial market infrastructures like T2S may be targeted by attackers for various reasons. In this context, both proactive and reactive information security controls must be in place to protect T2S from a wide range of threats that, despite all measures taken, do materialise.

#### **Operational procedure**

The aim of the present procedure is to address how significant information security events should be handled in a manner whereby potential damages caused to T2S stakeholders' interests are limited to a minimum.



The T2S Operator relies on a set of technical monitoring features and operational processes aiming at proactively detecting potentially harmful events and patterns at different levels of the application and technical components of the T2S Platform. More particularly, all incoming connections established with the T2S Platform over external network will be under constant monitoring.

If for whatever reason there is evidence that the system's security is at stake, the T2S Service Desk shall take any relevant measures, including one or more of the following:

- ▶ Contact the respective T2S Actor (excluding ICP), requesting them to take measures against the attack without delay;
- ▶ Verify, in cooperation with the respective T2S Actor (excluding ICPs) and the NSP, if technical measures on T2S' or NSP's side are available to return to a normal situation;
- ▶ Revoke user certificates or suspend user accesses; or, in last resort,
- ▶ Request the NSP to withdraw the involved T2S Actor (excluding ICPs) from the CGU in case the threat to the security of the platform with impact on other T2S Actors (excluding ICPs) is still present and no other measures have been proven effective.

The T2S Coordinator will be kept informed during the whole process, and a conference call of the Settlement Managers /Crisis Managers shall be initiated in case the withdrawal of the CSD/ NCB or DCP is deemed necessary or if global coordination is required to address the situation.

In case after two hours the cause of the disruption is not removed the T2S Coordinator according to the Crisis Management process will launch another Crisis Managers' conference call in order to assess the situation.

Where relevant:

- ▶ The T2S Operator shall suspend user accesses within one hour and ask Certification Authorities to revoke user certificates at the earliest opportunity;
- ▶ The NSP shall withdraw the T2S Actor(s) (excluding ICPs) from the CGU within one hour. The withdrawal can be requested for the U2A access, the A2A access, or both depending on the nature of the incident. The suspension from the CGU remains effective till the respective T2S Actor has declared to the T2S Service Desk that the threat no longer exists.

### 3.10 COMMUNICATION ON OPENING AND CLOSING DCA ACCOUNTS

#### **Description**

In case a payment bank wants to create or close/delete a dedicated cash account it has to request this through the NCB.

### **Operational procedure**

The creation, closure and deletion of a DCA is performed by the responsible NCB. The NCB opens, closes and deletes DCA accounts on the request of payment banks.

The opening of DCA accounts is using a two-step approach:

- ▶ The payment bank request the NCB to open the DCA;
- ▶ Once the DCA has been opened the payment bank contacts its CSD(s) to complete the set up and perform the link of the DCA to securities account(s). The CSD(s) links the DCA to the securities account(s) in order to specify the cash account used for the settlement of the cash leg of transactions.

Should a payment bank wish to close/ delete a DCA, this is also done following a two-step process:

- ▶ The payment bank request its CSD(s) to remove the link(s) between the DCA and the securities account(s);
- ▶ Once all the link(s) have been removed the payment bank requests the NCB to close the DCA. Once the DCA has been closed it cannot be used anymore for cash settlements and liquidity transfers.
- ▶ The DCA can be deleted by the NCB. Before the deletion of a DCA T2S performs an automatic check that no links to securities account(s) exist.

Payment banks will request the respective CSDs to create or remove the link(s) of the DCA to the securities account(s) when requesting the opening or closure/deletion of the DCA, consequently the CSD will be involved in the process and is made aware of created and closed/deleted DCA accounts.

In special situations such as the insolvency of a participant, where an NCB may decide to block a DCA, the NCB informs the CSD(s) using T2S broadcasts.

## 4 INCIDENT MANAGEMENT

An incident is defined as an unplanned interruption or a reduction in the quality of an agreed service.

The Incident Management process manages the lifecycle of all incidents, i.e. it identifies and resolves the incidents while providing updated information of the status of the relevant incident(s) to all T2S Actors (excluding ICPs) involved in day-to-day operations. This process coordinates all tasks to restore the services as quickly as possible and minimises the adverse impact of the incident on business operations within the limits of the agreed Service Levels as specified in the FA/ CPA Schedule 6 and the relevant T2S legal framework.

This chapter provides the high level principles as relevant for those involved in day-to-day operations.

The T2S Actors are shown in the Figure below:

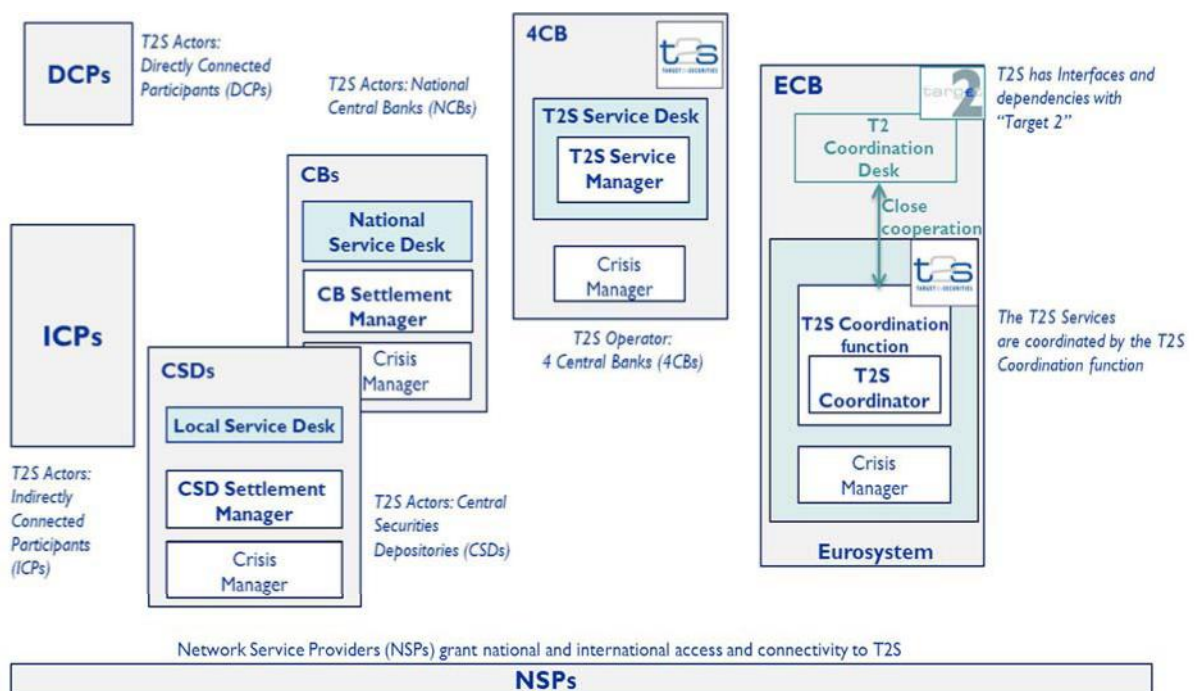


Figure 7 - T2S Actors and the NSPs

There are five pre-defined incident scenarios, depending on at which level the incident occurs. The five pre-defined scenarios are as follows:

1. Scenario 1: Incident at the level of the T2S Platform (at 4CB as T2S Operator);
2. Scenario 2: Incident at the level of TARGET2/ RTGS;
3. Scenario 3: Incident at the level of one or more CSDs;
4. Scenario 4: Incident at the level of DCPs or ICPs;
5. Scenario 5: Incident at the level of NSP.

The incident scenarios 1-5 are based on the general Incident Management process flow, although steps might differ from scenario. The processes shown in *Error! Reference source not found.* might have additional interfaces with other processes. In such case, the relevant processes are triggered.

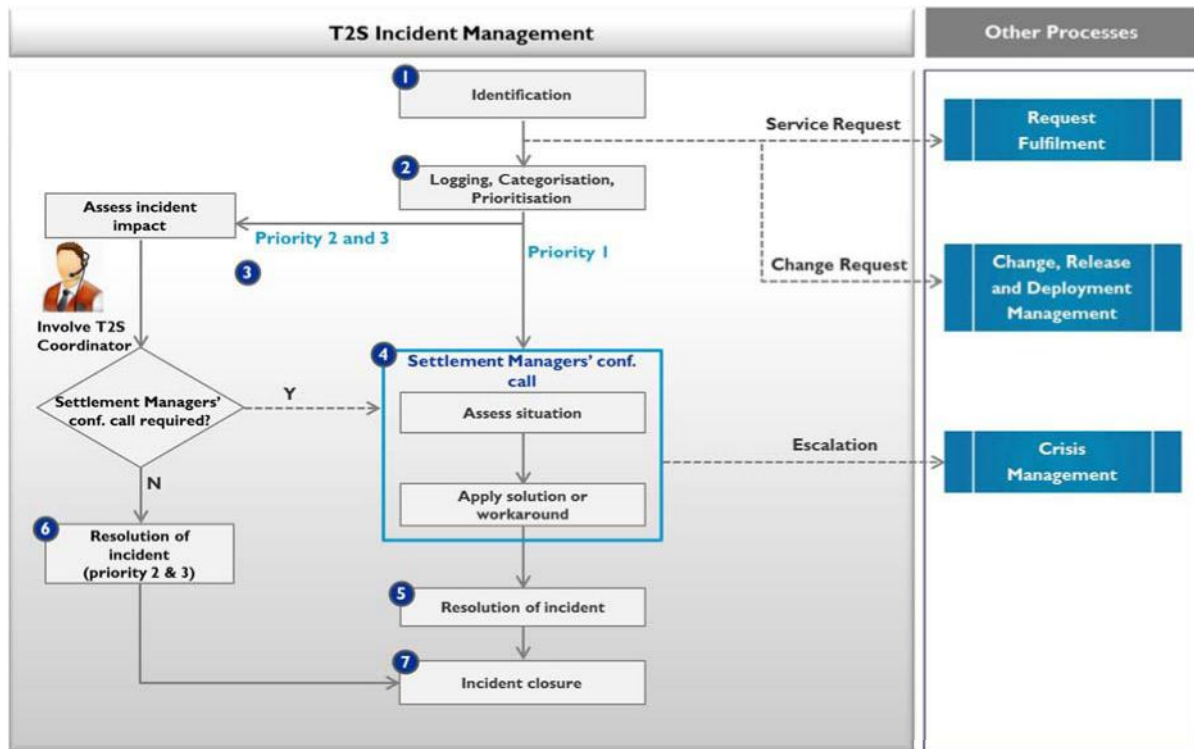


Figure 8 - General Incident Management process flow

An incident logged with the T2S Service Desk might be reprioritised during its life cycle, since at the initial stage the full picture of the impact might not be visible. The reprioritisation could be either upgrading the priority level from the originally logged or it may be reducing the priority level based on impact reassessment. The reprioritisation can be requested by any T2S Actor (excluding ICP) requesting the T2S Coordinator based on the re-assessed impact.

Incidents will be categorised in the following priorities:

Incident Priority	Severity	Impact
Priority 1	Critical	- Complete unavailability of all T2S Services (see FA/ CPA Schedule 6) - Complete unavailability of one or more services for which no work-around is available
Priority 2	Urgent	Unavailability of a service, but a work-around is available
Priority 3	Medium	All services are available, but some are experiencing performance issues
Priority 4	Low	Query or Service Request

Table 5 - Incident Priority

## 5 ACCESS MANAGEMENT

### 5.1 PURPOSE AND SCOPE OF ACCESS MANAGEMENT

The purpose of Access Management (ACM) is to grant authorised DCPs the right to use T2S Services, while preventing access to non-authorised users. ACM is designed to:

- ▶ Manage access to T2S Services; efficiently respond to requests for granting DCPs access to T2S Services, change access rights or remove access, ensure that the rights being provided or changed are properly granted;
- ▶ Monitor access to T2S Services and ensure that the rights provided to DCPs are not improperly used.

### 5.2 OVERVIEW OF CUSTOMER FACING ACM ACTIVITIES

DCPs can access the T2S Services through a NSP which, in addition to connectivity services, provides CGU management, Public Key Infrastructure (PKI) services, access control and non-repudiation of messages sent. While the biggest part of all activities to manage accesses end-to-end lies within the T2S providing organisations (4CB, Eurosystem) and within the licensed NSPs (SWIFT, SIA/Colt), in this chapter only the part relevant for DCPs is described.

The DCPs' relevant ACM activities are listed below:

- ▶ Requesting access rights;
- ▶ Requesting changes to existing access rights;
- ▶ Requesting removal of access rights;
- ▶ Monitoring access to T2S Services.

Prior to requesting access to T2S Services, DCPs need to inform the CSD/ Central Bank of their intention to connect directly with T2S. DCPs can request U2A access for their internal end-users and A2A access for their applications.

### 5.3 REQUESTING ACCESS RIGHTS

In order to get access to T2S Services, a DCP needs to follow the following steps to obtain:

- ▶ Digital Certificates used for authentication and signing purposes;
- ▶ The technical configuration of the NSP services;

- ▶ The proper configuration of T2S Static Data (Parties, Securities and Accounts).

Step	Action
1	Select the NSP of choice and join the related services
2	Select the NSP's offer and related products
3	Subscribe to the NSP's Services for T2S (e.g. inclusion into the CGU)
4	Request for the NSP digital certificates
5	Connectivity setup with NSP
6	NBB-SSS: Create the Party in T2S Static Data according to the T2S registration procedure
7	NBB-SSS: Link the Party to the Network Service of choice in Static Data
8	Create the users, set up the related Certificate-DN links, and assign role/ privileges to them according to their functions
9	Set up statements and reports in Static Data
10	Connectivity test with T2S

*Table 6 - Steps for Granting T2S Access to DiCoAs*

### 5.3.1 DCP REQUESTS

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#### **Step 1 Select the NSP of choice and join the related services**

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- ▶ Please see the NSP documentation and licence agreement.

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#### **Step 2 Select the NSP's offer and related products**

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- ▶ Please see the NSP documentation and visit the NSP website.

---

#### **Step 3 Subscribe to the NSP's Services for T2S (e.g. Inclusion into the CGU)**

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- ▶ Via the VA-NSP website, select the appropriate scenario and the environment(s) for which access is requested. Please see the NSP documentation. Access can be requested to each of the licensed NSP either for the T2S production environment for processing T2S Live Operations, or at once for all the relevant T2S test environments. Two registration scenarios are possible:

T2S Actor	CGU (2 scenarios)	Environment(s)
DCP	U2A only	Test
		Production
	U2A + A2A	Test
		Production

*Table 7 - Environments Available to T2S Actors*

- ▶ This step requires the dual approval of the NBB-SSS and of the T2S Operator;
- ▶ The requester is informed via e-mail of any change in the status of the request. If the request is rejected, the rejection cause is provided. If it is accepted, a final confirmation is provided to the requestor once the implementation date is defined;
- ▶ If a DCP is customer of more than one CSD/ Central Banks this step must be performed only once. Upon request the T2S Service Desk can confirm to the NBB-SSS if a DCP is already registered to the T2S Connectivity Services.

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#### **Step 4 Request for the NSP digital certificates**

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- ▶ The NSP Certificate Authority can issue certificates:
  - ◆ on USB token for the U2A access of end-users; or
  - ◆ on HSM for the A2A access of applications.

*Please see the NSP documentation.*

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#### **Step 5 Connectivity setup with the NSP**

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- ▶ On the implementation date, the NSP performs service provisioning activities according to the request form, after which a final confirmation is sent to the requester.

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#### **Step 6 NBB-SSS: Create the Party in T2S Static Data according to the T2S registration procedure**

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- ▶ The NBB-SSS will create the DCP in T2S;
- ▶ T2S Registration Guide and UHB V2.0 *Section 3.8 “Party Management”*; *UDFS V2.0 Sections 1.2 “Configuration of Parties, Securities and Accounts” and 1.3 “Access to T2S”*

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#### **Step 7 NBB:SSS: Link the Party to the Network Service of choice in Static Data**

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- ▶ UHB V2.0 Sections 3.8.1 “Administration of Participants” and 3.17.1 “Configuration of a Technical Address” to configure one or more technical addresses and create technical address service links.

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#### **Step 8 Create the users, set up the related Certificate-DN links, and assign role/ privileges to them according to their functions**

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- ▶ Only registered users have access to the T2S GUI, therefore registration in T2S reference data and to the network is necessary prior to the first GUI access;
- ▶ UHB V2.0 Section 3.2 “Access Rights”. See also *UDFS V2.0 Sections 1.2 “Configuration of Parties, Securities and Accounts” and 1.3 “Access to T2S”*;

- ▶ In order to create the users, set up the related certificate-DN links, see the UHB V2.0 Section 3.2.4 “Configuration of a User” and follow the procedure described in the T2S Connectivity Guide Section 4.3 “Setting up Parties and Users”;
- ▶ In order to assign roles and privileges according to the parties’ and users’ functions, see the UHB V2.0 Sections 3.2.1.3 “Assign a Role to a User” and 3.2.1.4 “Assign a Role to a Party”.

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### **Step 9 Set up statements and reports in Static Data**

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- ▶ see UHB V2.0 Sections 3.7 “Cash and Settlement Monitoring” and 3.9 “Report”.

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### **Step 10 Connectivity test with T2S**

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- ▶ see User Testing documentation and to the T2S Connectivity Guide.

#### 5.3.2 DCP PRIVILEGES

In the hierarchical party model structure of T2S the NBB-SSS can grant all available privileges to the DCP. The DCP can inherit system privileges only via the responsible CSD, i.a. the NBB-SSS.

The DCP would typically have Admin users and Business users segregated although T2S does not prevent assigning “business” privilege to admin user.

The set of privileges which promote a standard user to admin user is the following:

- ARM\_AdministerParty,
- ARM\_GrantPrivilege,
- ARM\_GrantRole,
- ARQ\_GrantedSysPrivilegesListQuery,
- ARQ\_GrantObjectPrivilegesListQuery,
- ARQ\_GrantedRolesListQuery.

Based on this configuration the Admin user will inherit all the privileges granted at party level and can propagate the privileges to other users within their party.

The full list of privileges is attached in annex 1.



## 6 SERVICE CONTINUITY MANAGEMENT

### 6.1 PURPOSE AND SCOPE OF SERVICE CONTINUITY MANAGEMENT

According to the FA/ CPA, the terms “business continuity” and “disaster recovery” mean the set of rules and procedures aimed at resuming normal T2S Services in compliance with the Service Levels as described in FA Schedule 6 (T2S Service Level Agreement), after the occurrence of an incident which triggers a Crisis or disaster, as well as at mitigating the impact of such an incident.

In terms of ITIL® V3, Business Continuity Management (BCM) deals with the analysis, mitigation and prevention of risks, which may lead to an interruption in the business process regardless of what root-cause (e.g. non-IT issues as earth quakes, or IT-related service breakdowns).

BCM aims to reduce the probability of down-time risks of critical business processes to an acceptable level and to devise measures to ensure that business processes can be resumed within a previously determined period of time and scope. The Service Continuity Management (SCM) is a component of the BCM process and focuses on restoring and protecting the required T2S services. While BCM is a holistic management process of the Eurosystem which goes beyond T2S, the real SCM tasks, which focus on the T2S Services, are provided by the 4CB. The Service Continuity Management assures that T2S Services Provider (4CB) undertakes all means to implement and maintain service assets that will provide the agreed level of contingency and recovery. The T2S Services have to be supported through major failures or disruptive events in order to return to normal operations after a Crisis event. Continuity is assured primarily through redundancy and providing alternative resources that are dedicated to delivering services during contingencies and that are not impacted by the original event.

### 6.2 T2S SERVICE CONTINUITY

Like in TARGET2, the architecture of the T2S core system is based on the concept of “2 regions/ 4 sites”. The four sites are fully equivalent and each of them is equipped with the same technical resources: processor, storage, network interface, software, etc. The two sites in each region are located at a distance that is sufficient to have a distinct risk profile. The two regions are located at geographical distance of several hundreds of kilometres.

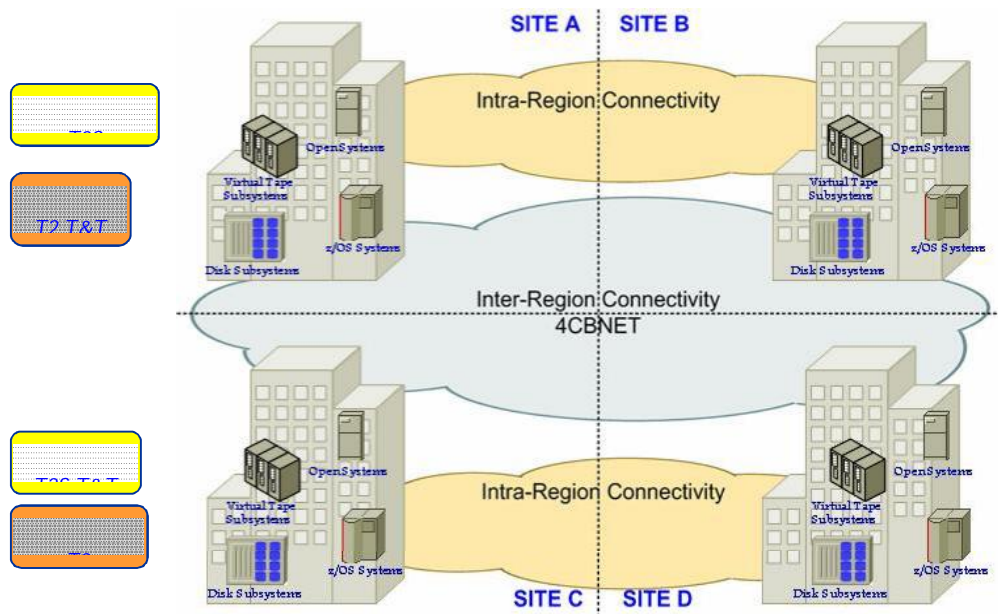


Figure 9 - T2S service continuity

The service continuity design involves different levels of the overall architecture requiring various technical solutions. A detail description of the technical solution can be found in the document T2S General Technical Specifications v2.2.0.

#### 6.2.1 MAJOR FAILURE

Each region has the capability of a local recovery; the two sites in each region are located at a distance of a few kilometres from each other. The recovery within a region is assured by Synchronous Remote Copy (SRC) activated on the whole environment between the two sites of the same region. The SRC guarantees real time data updates in both sites; i.e. each write operation is completed only when both sites are updated. Major failure or disaster is meant to indicate a serious service interruption which is solved by relocation of T2S operations to a second site (intra-region failover), physically separate from the primary site. As a synchronous mode is applied, the databases at both sites are exactly the same, and no reconciliation is required after a failover.

An intra-region failover can be conducted by the 4CB if they decide so following an appropriate technical assessment. Both the problem identified and its envisaged solution must be reported to the T2S Coordinator as a priority 1 incident, and will follow standard Incident and Crisis Management process.



Figure 10 - Communication flow during Crisis: initiating Crisis Managers' conference call

An intra-region failover ensures the continuation of normal business within a maximum of one hour.

The processing is interrupted during the failover, but the T2S Actors are encouraged to keep on sending messages/ files, which will be queued, to the T2S System and processed when the System restart. The GUI interface is unavailable during the recovery.

The activation of the intra-region recovery on the TARGET2 System will cause the unavailability of the T2S test environments, resuming will be done on a best effort basis.

### 6.2.2 REGIONAL DISASTER

Recovery from a regional disaster is based on the presence of an alternate region located at a long distance away from the primary one (hundreds of kilometres). Due to the long distance, the recovery from one region to the other is only possible by Asynchronous Remote Copy (ARC), activated on the whole environment. The ARC cannot guarantee real time updates in both regions. As write operations in the remote region are asynchronous, it is possible that some data updates are lost if a regional disaster occurs. The amount of lost updates depends on the workload. The databases in the two regions show the processing status with a time discrepancy of a maximum of two minutes.

The recourse to inter-region recovery may be triggered by a number of events, including a wide-area disaster having a high impact on the region operating T2S; to be effective even in a worst-case scenario, the plan for recovering the operating region avoids any dependency (decisional, personnel, technical, etc.) from that region; i.e. the alternate region is able to take over the operation without relying at all on the impacted region.

If both sites within Region 1 become unavailable at the same time or if the asynchronous copy facility has problems, then, a loss of data would occur. In such a situation, there is no alternative but failing over to Region 2 and reconciling the missing traffic. Still the resumption of the business in Region 2 should be enabled within two hours in Region 1, excluding the time between informing service users and the service users' response, i.e. the time they need to reconcile the lost data.

Should the type of incident (e.g. in case of the so-called rolling disaster) allow an orderly and progressive external connections closure so to complete smoothly the asynchronous copy towards Region 2, the inter-region failover and the resumption of operations in Region 2 would result in no loss of data and it will be done within two hours.

Not just processing, even access to GUI may also be interrupted during a failover. The users should not send new traffic to the system during a failover.

Given the severe circumstances leading to an inter-region failover, both the Settlement and Crisis Managers will be kept informed all through the process, and accompanying conference calls will be held. More precisely, communication in the event of an inter-region failover is as follows:

- ▶ Regular reporting of the incident from detection onwards to the T2S Coordination function with a Settlement Managers' conference call and subsequent a Crisis Managers' conference call;
- ▶ After the successful failover a Crisis Managers' conference call is held to discuss next steps or approve the opening of the system for normal processing; afterwards there is a Settlement Managers' conference call to execute decisions taken by the Crisis Managers.

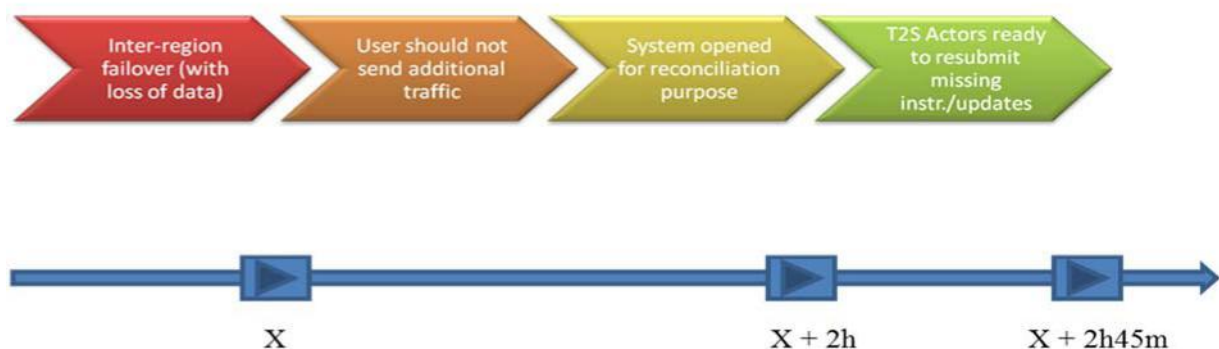


Figure 11 - Communication flow during Crisis: initiating Crisis Managers' conference call

The activation of the intra-region recovery on the TARGET2 System could cause the unavailability of the T2S test environments, resuming will be done on a best effort basis.

### 6.2.3 REBUILDING PROCESS

In case of regional disaster with loss of data, the rebuilding process is conducted by the T2S Actors (excluding ICPs) that have submitted instructions via every channel in the last 10 minutes before the consistency point with the support of the T2S Service Desk.



Where 'X' is the point in time that -T2S is no longer available due to inter-region failover with loss of data

Figure 121- Rebuilding after Crisis

Rebuilding process:

In such case the T2S Actors (excl. ICPs) need to perform a reconciliation of instructions the respective T2S Actor has recorded as transmitted against the instructions present in T2S and identify which instructions have been lost during the disaster.

CSD/ Central Bank/ DCP can use T2S queries (U2A or A2A) to retrieve the information related to the instructions they have already transmitted to T2S, which may have lost during the regional disaster period. DCPs that have instructed liquidity transfers during this period should also inform their respective Central Banks.

### 6.3 INFORMATION REQUIRED BY CSD / DCP OF CSD IN CASE OF RAD

Once the system is opened for the purpose of reconciliation, meaning that it will not be possible to send new instructions in A2A mode (technically enforced), the users have to avoid to send new instructions in U2A mode (not technically enforced). Nevertheless, with regards to instructions, that would have been transmitted using the GUI during the time period affected by the regional disaster, the NBB-SSS can either ask its DCPs to inform of these instructions (GUI users to perform their own reconciliation), or these can be identified and reinstructed at a later stage by the participants, as this step is likely to be time consuming and only affect a limited number of messages.

To avoid receiving new instructions via U2A mode, the NBB-SSS will communicate and instruct its DCPs not to use the T2S GUI to submit new instructions. CSDs can proceed for the reconciliation process using the standard query tool (both in U2A and in A2A). CSDs can use real-time T2S queries to retrieve information on demand. The information provided in a query response is always based on the latest data available in T2S. As queries are sent and answered in real-time, the query response in general consist of only one XML message with result.

The NBB-SSS would need to perform reconciliation for the last 10 minutes on the following:

- ▶ Verify the settlement instructions processed information;
- ▶ Verify the Intra-Position Movement information;
- ▶ Verify the Amendment Instruction information for Settlement Instructions or Settlement Restrictions on Securities Position and;
- ▶ Verify the Cancellation Instruction information for Settlement Instructions or Settlement Restrictions on Securities Position.

T2S includes in a query result all securities account owned by all the participants of the NBB-SSS. For a query on the level of the participant, T2S includes all the securities of the participant. Nonetheless, depending on the search criteria which are specified in the query message, the query response is grouped by the specified search criteria. For example, if the NBB-SSS queries for all the Settlement Instructions at the level of securities account owner or securities account then the Settlement Instructions within the query response is grouped by securities account owner or securities account respectively.

Therefore, there are two approaches for reconciliation:

- ▶ The NBB-SSS can process reconciliation for its own instructions (and ICPs') and DCP instructions separately to T2S or;
- ▶ The NBB-SSS can process reconciliation for settlement instructions or settlement restrictions sent by their DCPs altogether, as they cover all securities account owned by the NBB-SSS including DCP's securities accounts.

The NBB-SSS will provide the reconciliation information to its DCPs. After reconciliation, once the confirmation that everyone is in a position to submit the possibly missing instructions given, the system is reopened in full mode, i.e. including instructions and updates processing. In resubmitting instructions the T2S Actors (excluding ICPs) have to ensure, to the maximum possible extent, that this is done using the same business reference as before (in Region 1) but not the same network reference. This would allow the standard double-entry check at T2S central system level to properly discriminate possible duplicated messages and to consequently avoid double bookings/updates. When the internal evidences of all impacted T2S Actors (excluding ICPs) have been re-established as they were in Region 1, the system can be again used for normal operations.

#### **6.4**                    SERVICE CONTINUITY TESTING

DCPs are subject to service continuity testing procedures.

For the tests to be effective, they are either performed in the production environment or, where this is not considered appropriate due to the additional operational risk, in a test environment as similar as possible to the production environment. The testing of the business continuity procedures of the NSPs do not fall within the scope of this document and their testing requirements are described in the NSP User Documentation.

Service continuity measures aim to ensure that failures of T2S components at any level do not cause a disruption to the overall functioning of the system.

DCPs need to first rely on their own backup measures. T2S and the NBB-SSS offer only limited contingency arrangements to overcome interruptions happening at the side of the DCPs in the connection with the T2S System, aiming at processing a limited number of transactions.

The NBB-SSS will collect test reports from its DCPs and send the reports to the T2S Coordinator, in principle on a yearly basis. It is expected that the test participants will perform a limited number of business transactions from the secondary site. Test results should be classified as either successful or unsuccessful. When the test objectives are not met, the test result should be seen as unsuccessful. For unsuccessful tests a repetition of the test is expected to be performed within 3 months.



## Annex 1

**T2S Direct: Access Rights (T2S privileges) required by DCPs**The list of privileges is based on the one published by the ECB on 29.9.14. <http://www.ecb.europa.eu/press/inf/2014/inf140929/about/keysdocs/html/index.en.html>

	Class of Privileges	Privilege	Privilege type	object type	Privilege ShortName - New	Usage	CSD	Privileges Can be given to DCPs (Y/N)
3	Access Rights Management	Administrator Party	System	n/a	ARM_AdministratorParty	U2A	Y	Y
4	Dynamic Data Queries	Allegation Query	Object	Party	DDQ_AllegationQuery	U2A	Y	Y
5	Settlement CSD	Amend Process Indicator of a non-modifiable Settlement Instruction on behalf of the Instructing Party of the underlying instruction	Object	Party	SIC_ANMBI	Both	Y	Y
6	Settlement General	Amend Process Indicator of a Settlement Instruction/Settlement Restriction on Securities either on a Securities Account or on Behalf of the CSD in T2S or on Behalf of an external CSD	Object	Securities Account Party	SIG_AMNFI	Both	Y	Y
7	Dynamic Data Queries	Amendment Instruction for Intra-Position Movement or Settlement Instruction Audit Trail Details Query	Object	Securities Account	DDQ_ArrndInstIntrPosMovSellInsAudTrDe	U2A	Y	Y
8	Dynamic Data Queries	Amendment Instruction for Intra-Position Movement or Settlement Instruction Audit Trail List Query	Object	Securities Account	DDQ_ArrndInstIntrPosMovSellInsAudTrLis	U2A	Y	Y
9	Dynamic Data Queries	Amendment Instruction Query for Intra-Position Movements and Settlement Instructions	Object	Securities Account	DDQ_AmendInstrQIntraPosMov+SetInst	Both	Y	Y
10	MSA Data Queries	Attribute Domain Details Query	System	n/a	MSA_AttributeDomainDetailsQuery	U2A	Y	yes, but no visibility
11	MSA Data Queries	Attribute Domain List Query	System	n/a	MSA_AttributeDomainListQuery	U2A	Y	yes, but no visibility
12	MSA Data Queries	Attribute Reference Details Query	System	n/a	MSA_AttributeReferenceDetailsQuery	U2A	Y	yes, but no visibility
13	MSA Data Queries	Attribute Reference List Query	System	n/a	MSA_AttributeReferenceListQuery	U2A	Y	yes, but no visibility
14	MSA Data Queries	Broadcast Query	System	n/a	DDQ_BroadcastQuery	U2A	Y	Y
15	Dynamic Data Queries	Cancel Non-modifiable Instructions on behalf of the Instructing party of the Underlying Settlement Instruction	Object	Party	SIC_CNMBI	Both	Y	Y
16	Settlement General	Cancel Settlement Instruction /Settlement Restriction on Securities either on a Securities Account or on Behalf of the CSD in T2S, on Behalf of external CSD or on Behalf of an Administering Party	Object	Securities Account Party	SIG_CANCEL	Both	Y	Y
17	Dynamic Data Queries	Cancellation Instruction for Intra-Balance Movement Audit Trail Details Query	Object	T2S Dedicated Cash Account	DDQ_CancelInstrIntraBalancMovAudTrDe	U2A	Y	Y
18	Dynamic Data Queries	Cancellation Instruction for Intra-Position Movement or Settlement Instruction Audit Trail Details Query	Object	Securities Account	DDQ_CancelInstrIntraPosMovAudTrDe	U2A	Y	Y
19	Dynamic Data Queries	Cancellation Instruction for Intra-Position Movement or Settlement Instruction Audit Trail List Query	Object	Securities Account	DDQ_CancelInstrIntraPosMovAudTrLis	U2A	Y	Y
20	Dynamic Data Queries	Cancellation Instruction Query for Intra-Position Movements and Settlement Instructions	Object	Securities Account	DDQ_CancelInstrForSI+IntraPosMovQuer	Both	Y	Y
21	Access Rights Queries	Certificate Query	System	n/a	ARQ_CertificateDNQuery	U2A	Y	Y
22	Scheduling Queries	Closing Day Query	System	n/a	SCQ_ClosingDayQuery	U2A	Y	Y
23	SAC Data Queries	CMD Securities Account Link List Query	System	n/a	SAQ_DisplayCMBSecAcctLinkListQuery	U2A	Y	Y
24	Dynamic Data Queries	Collateral Value of a Security Query	System	n/a	DDQ_CollatValueOfSecurityQuery	Both	Y	Y
25	Dynamic Data Queries	Collateral Value per T2S Dedicated Cash Account Query	System	n/a	DDQ_CollatValuePerT2SDedCashQuery	Both	Y	Y
26	Dynamic Data Queries	Conditional Security Delivery Rule List Query	System	n/a	MSA_ConditSecDeliveryRuleQuery	U2A	Y	Y
27	MSA Data Queries	Conditional Security Delivery Rule Set Query	System	n/a	MSA_ConditSecDeliveryRuleSetQuery	U2A	Y	Y
28	Static Data Queries	Create Attribute Domain	System	n/a	MSC_CreateAttributeDomain	U2A	Y	Y
29	Market-Specific Configuration	Create Attribute Reference	System	n/a	MSC_CreateAttributeReference	U2A	Y	N
30	Market-Specific Configuration	Create Certificate Distinguish Name	System	n/a	ARM_CreateCertificateDN	U2A	Y	N
31	Access Rights Management	Create CMB Securities Account Link	System	n/a	SAC_CreateCMBSecuritiesAccountLink	Both	Y	Y



34	Market-Specific Configuration	Create Conditional Security Delivery Rule	System	n/a	MSC	CreateConditionSecurDelivRule	U2A	Y	N
35	Market-Specific Configuration	Create Conditional Security Delivery Rule Set	System	n/a	MSC	CreateConditionSecurDelivRuleSet	U2A	Y	N
36	Securities Account Data Manager	Create CSD Account Link	System	n/a	SAC	CreateCSDAccountLink	U2A	Y	N
37	Security Data Management	Create Eligible Counterpart CSD Link	System	n/a	SDM	CreateEligibleCounterpartCSDLink	Both	Y	N
38	Market-Specific Configuration	Create Market-Specific Attribute	System	n/a	MSC	CreateMarketSpecificAttribute	U2A	Y	N
39	Message Subscription	Create Message Subscription Rule	System	n/a	MSU	CreateMessageSubscriptionRule	U2A	Y	Y
40	Message Subscription	Create Message Subscription Rule Set	System	n/a	MSU	CreateMessSubsRuleSet	U2A	Y	Y
41	Party Data Management	Create Party	Object	Party	PDM	CreateParty	Both	Y	Y
42	Report Configuration	Create Report Configuration	System	n/a	RCO	CreateReportConfiguration	U2A	Y	Y
43	Market-Specific Configuration	Create Restriction Type	System	n/a	MSC	CreateRestrictionType	U2A	Y	N
44	Market-Specific Configuration	Create Restriction Type Rule	System	n/a	MSC	CreateRestrictionTypeRule	U2A	Y	N
45	Access Rights Management	Create Role	System	n/a	ARM	CreateRole	U2A	Y	N
46	Network Configuration	Create Routing	System	n/a	NCO	CreateRouting	U2A	Y	Y
47	Access Rights Management	Create Secured Group	System	n/a	ARM	CreateSecuredGroup	U2A	Y	N
48	Securities Account Data Manager	Create Securities Account	Object	Party	SAC	CreateSecuritiesAccount	Both	Y	Y
49	Security Data Management	Create Security	Object	Party	SDM	CreateSecurity	Both	Y	Y
50	Security Data Management	Create Security CSD Link	System	n/a	SDM	CreateSecurityCSDLink	Both	Y	N
51	Network Configuration	Create Technical Address Network Service Link	System	n/a	NCO	CreateTechnAddressNetServLink	U2A	Y	N
52	Access Rights Management	Create User	System	n/a	ARM	CreateUser	U2A	Y	Y
53	Access Rights Management	Create User Certificate Distinguish Name Link	System	n/a	ARM	CreateUserCertificateDNLink	U2A	Y	Y
54	SAC Data Queries	CSD Account Link Query	System	n/a	SAQ	CSDAccountLinkQuery	U2A	Y	yes, but no visibility
55	Settlement CSD	CSD Hold Settlement Instruction either on a Securities Account or on Behalf of the CSD in T2S	Object	Securities Account Party	SIC	CSDHI	Both	Y	Y
56	Billing Queries	Cumulative Billing Data List Query	Object	Party	BIQ	CumulativeBillDataListQuery	U2A	Y	Y
57	Billing Queries	Cumulative billing data query	Object	Party	BIQ	CumulativeBillDataDetailsQuery	Both	Y	Y
58	Static Data Queries	Currency Query	System	n/a	SDQ	CurrencyQuery	U2A	Y	Y
59	Scheduling Queries	Current Status of the T2S Settlement Day	System	n/a	SCQ	CurrentStatusOfT2SSettlDay	Both	Y	Y
60	Dynamic Data Queries	Data Changes of a Business Object Details Query	System	n/a	DDQ	DataChan-BusinessObjDetailQue	U2A	Y	Y
61	Dynamic Data Queries	Data Changes of a Business Object List Query	System	n/a	DDQ	DataChan-BusinessObjListQuery	U2A	Y	Y
62	Scheduling Queries	Default Event Schedule Details Query	System	n/a	SCQ	DefaultEventScheduleDetailsQuery	U2A	Y	Y
63	Market-Specific Configuration	Delete Attribute Domain	System	n/a	MSC	DeleteAttributeDomain	U2A	Y	N
64	Market-Specific Configuration	Delete Attribute Reference	System	n/a	MSC	DeleteAttributeReference	U2A	Y	N
65	Access Rights Management	Delete Certificate Distinguish Name	System	n/a	ARM	DeleteCertificateDN	U2A	Y	Y
66	Securities Account Data Manager	Delete CMB Securities Account Link	System	n/a	SAC	DeleteCMBSecuritiesAccountLink	U2A	Y	Y
67	Market-Specific Configuration	Delete Conditional Security Delivery Rule	System	n/a	MSC	DeleteConditionSecurDelivRule	U2A	Y	N
68	Market-Specific Configuration	Delete Conditional Security Delivery Rule Set	System	n/a	MSC	DeleteConditionSecurDelivRuleSet	U2A	Y	N
69	Securities Account Data Manager	Delete CSD Account Link	System	n/a	SAC	DeleteCSDAccountLink	U2A	Y	N
70	Security Data Management	Delete Eligible Counterpart CSD Link	System	n/a	SDM	DeleteEligibleCounterpartCSDLink	U2A	Y	N
71	Market-Specific Configuration	Delete Market-Specific Attribute	System	n/a	MSC	DeleteMarketSpecificAttribute	U2A	Y	N
72	Message Subscription	Delete Message Subscription Rule	System	n/a	MSU	DeleteMessageSubscriptionRule	U2A	Y	N
73	Message Subscription	Delete Message Subscription Rule Set	System	n/a	MSU	DeleteMessSubscriptionRuleSet	U2A	Y	N
74	Party Data Management	Delete Party	Object	Party	PDM	DeleteParty	Both	Y	Y
75	Report Configuration	Delete Report Configuration	System	n/a	RCO	DeleteReportConfiguration	U2A	Y	Y
76	Market Specific Configuration	Delete Restriction Type	System	n/a	MSC	DeleteRestrictionType	U2A	Y	N
77	Market-Specific Configuration	Delete Restriction Type Rule	System	n/a	MSC	DeleteRestrictionTypeRule	U2A	Y	N
78	Access Rights Management	Delete Role	System	n/a	ARM	DeleteRole	U2A	Y	N

79	Network Configuration	Delete Routing		System	n/a	NCO_DeleteRouting	U2A	Y	Y
80	Access Rights Management	Delete Secured Group		System	n/a	ARM_DeleteSecuredGroup	U2A	Y	N
81	Securities Account Data Manager	Delete Securities Account		Object	Securities Account	SAC_DeleteSecuritiesAccount	Both	Y	Y
82	Security Data Management	Delete Security		Object	Security	SDM_DeleteSecurity	Both	Y	Y
83	Security Data Management	Delete Security CSD Link		System	n/a	SDM_DeleteSecurityCSDLink	U2A	Y	N
84	Network Configuration	Delete Technical Address Network Service Link		System	n/a	NCO_DeleteTechAddressNetServLink	U2A	Y	N
85	Access Rights Management	Delete User		System	n/a	ARM_DeleteUser	U2A	Y	Y
86	Access Rights Management	Delete User Certificate Distinguish Name Link		System	n/a	ARM_DeleteUserCertificDNLink	U2A	Y	Y
87	Security Data Queries	Eligible Counterpart CSD Details Query		System	n/a	SEQ_EligibleCounterpartCSDDetailsQuery	U2A	Y	yes, but no visibility
88	Security Data Queries	Eligible Counterpart CSD List Query		System	n/a	SEQ_EligibleCounterpartCSD_ListQuery	U2A	Y	yes, but no visibility
89	Scheduling Queries	Event Type Details Query		System	n/a	SCQ_EventTypeDetailsQuery	U2A	Y	Y
90	Scheduling Queries	Event Type List Query		System	n/a	SCQ_EventTypeListQuery	U2A	Y	Y
91	Access Rights Management	Grant privilege		System	n/a	ARM_GrantPrivilege	U2A	Y	Y
92	Access Rights Management	Grant/Revoke Role		System	n/a	ARM_GrantRole	U2A	Y	Y
93	Access Rights Queries	Granted Object Privileges List Query		System	n/a	ARQ_GrantObjectPrivilegesListQuery	U2A	Y	Y
94	Access Rights Queries	Granted Roles List Query		System	n/a	ARQ_GrantedRolesListQuery	U2A	Y	Y
95	Access Rights Queries	Granted System Privileges List Query		System	n/a	ARQ_GrantedSysPrivileges_ListQuery	U2A	Y	Y
96	Settlement CSD	Hold Non-modifiable instructions on behalf of the instructing party of the Underlying Settlement Instruction		Object	Party	SIC_HNMBI	Both	Y	Y
97	Dynamic Data Queries	Hold/Release Instruction Audit Trail Details Query		Object	Securities Account	DDQ_HoldReleaseInstrAuditTrailDetQuery	U2A	Y	Y
98	Dynamic Data Queries	Hold/Release Instruction Audit Trail List Query		Object	Securities Account	DDQ_HoldReleaseInstrAuditTrailListQuery	U2A	Y	Y
99	Dynamic Data Queries	Inbound Files Details Query		System	n/a	DDQ_InboundFilesDetailsQuery	U2A	Y	Y
100	Dynamic Data Queries	Inbound Files List Query		System	n/a	DDQ_InboundFilesListQuery	U2A	Y	Y
101	Dynamic Data Queries	Inbound Message Details Query		System	n/a	DDQ_InboundMessagesDetailsQuery	U2A	Y	Y
102	Dynamic Data Queries	Inbound Message List Query		System	n/a	DDQ_InboundMessagesListQuery	U2A	Y	Y
103	Dynamic Data Queries	Intra-Position Movement Audit Trail Details Query		Object	Securities Account	DDQ_IntraPosMovAuditTrailDetQuery	U2A	Y	Y
104	Dynamic Data Queries	Intra-Position Movement Audit Trail List Query		Object	Securities Account	DDQ_IntraPosMovAuditTrailListQuery	U2A	Y	Y
105	Dynamic Data Queries	Intra-Position Movements Query		Object	Securities Account	DDQ_IntraPosMovQuery	Both	Y	Y
106	Security Data Queries	SIN List Query		System	n/a	SEQ_ISINListQuery	Both	Y	Y
107	Billing Queries	Itemised Billing Data List Query		Object	Party	BIQ_ItemisedBillDataListQuery	U2A	Y	Y
108	Billing Queries	Itemised Billing Data Query		Object	Party	BIQ_ItemisedBillDataDetailsQuery	Both	Y	Y
109	T2S Dedicated Cash Account Data	Limit Query		System	n/a	DCQ_LimitQuery	Both	Y	Y
110	Dynamic Data Queries	Limit Utilisation Journal Query		System	n/a	DDQ_LimitUtilisationJournalQuery	Both	Y	Y
111	Dynamic Data Queries	Limit Utilisation Query		System	n/a	DDQ_LimitUtilisationQuery	Both	Y	Y
112	Settlement General	Link to an instruction/Pool Reference belonging to a specific Party		Object	Party	SIG_LIPRP	Both	Y	Y
113	Dynamic Data Queries	Maintenance for Intra-Position Movements and Settlement Instructions Query		Object	Securities Account	DDQ_MainForIntraPosMov-SettlInstrQ	Both	Y	Y
114	MSA Data Queries	Market-Specific Attribute Detail Query		System	n/a	MSA_MarketSpecAttributeDetailQuery	U2A	Y	Y
115	MSA Data Queries	Market-Specific Attribute List Query		System	n/a	MSA_MarketSpecAttributeQuery	U2A	Y	Y
116	MSA Data Queries	Market-Specific Restriction List Query		System	n/a	MSA_MarketSpecRestrictListQuery	U2A	Y	Y
117	MSA Data Queries	Market-Specific Restriction Type Rule Detail Query		System	n/a	MSA_MarketSpecRestrictDetailQuery	U2A	Y	Y



MSA Data Queries	Market-Specific Restriction Type Rule Parameter Details Query	System	n/a	MSA_SpecResrTypeRuleParamDef	U2A	Y	Y
118	MSA Data Queries	System	n/a	MSA_MarkSpecResrTypeRuleSetListQuery	U2A	Y	Y
119	Message Subscription Queries	System	n/a	MSQ_MessSubscrRuleSetListQuery	U2A	Y	Y
120	Message Subscription Queries	System	n/a	MSQ_MessSubscrRuleSetDetailQuery	U2A	Y	Y
121	Message Subscription Queries	System	n/a	MSQ_MessSubscrRuleSetListQuery	U2A	Y	Y
122	Message Subscription Queries	System	n/a	MSQ_MessSubscrRuleSetListQuery	U2A	Y	Y
123	Network Configuration Queries	System	n/a	NCQ_NetworkServiceListQuery	U2A	Y	Y
124	Message Management	System	n/a	MMA_NewBroadcast	U2A	Y	Y
125	Scheduling Queries	System	n/a	SCQ_OperatingDayTypeDetailsQuery	U2A	Y	N
126	Scheduling Queries	System	n/a	SCQ_OperatingDayTypeListQuery	U2A	Y	N
127	Dynamic Data Queries	System	n/a	DDQ_OutboundFilesDetailsQuery	U2A	Y	Y
128	Dynamic Data Queries	System	n/a	DDQ_OutboundFilesListQuery	U2A	Y	Y
129	Dynamic Data Queries	System	n/a	DDQ_OutboundMessDetailsQuery	U2A	Y	Y
130	Dynamic Data Queries	System	n/a	DDQ_OutboundMessListQuery	U2A	Y	Y
131	Static Data Queries	System	n/a	SDQ_PartialSettlThresholdQuery	U2A	Y	Y
132	Party Data Queries	Object	Party	PDQ_PartyAuditTrailQuery	Both	Y	Y
133	Settlement General	Object	Securities Account Party	SIG_PTYHI	Both	Y	Y
134	Party Data Queries	Object	Party	PDQ_PartyListQuery	Both	Y	Y
135	Party Data Queries	Object	Party	PDQ_PartyReferDataQuery	Both	Y	Y
136	Access Rights Queries	System	n/a	ARQ_PrivilegeQuery	U2A	Y	Y
137	Settlement CSD	Object	Party	SIC_RCOSD	Both	Y	Y
138	Settlement CSD	Object	Securities Account Party	SIC_RCSDH	Both	Y	Y
139	Settlement CSD	Object	Securities Account Party	SIC_RCSDV	Both	Y	Y
140	Settlement CSD	Object	Party	SIC_RNIMBI	Both	Y	Y
141	Settlement General	Object	Securities Account Party	SIG_RPTYH	Both	Y	Y
142	Report Configuration Queries	System	n/a	RCO_ReportConfigDetailQuery	U2A	Y	Y
143	Report Configuration Queries	System	n/a	RCO_ReportConfigListQuery	U2A	Y	Y
144	Report Queries	System	n/a	RCO_ReportDetailsQuery	Both	Y	Y
145	Report Queries	System	n/a	RCO_ReportListQuery	U2A	Y	Y
146	Message Management	Object	Party	MMA_ResendCommunication	Both	Y	Y
147	Static Data Queries	System	n/a	SDQ_ResidualStaticDataAuditTrailQuery	U2A	Y	Y
148	Party Data Queries	Object	Party	PDQ_RestrictedPartyQuery	Both	Y	Y
149	Access Rights Management	System	n/a	ARM_RevokerPrivilege	U2A	Y	Y
150	Access Rights Queries	System	n/a	ARQ_RoleListQuery	U2A	Y	Y
151	Network Configuration Queries	System	n/a	NCQ_RoutingListQuery	U2A	Y	Y
152	Access Rights Queries	System	n/a	ARQ_SecuredGroupDetailsQuery	U2A	Y	yes, but no visibility
153	Access Rights Queries	System	n/a	ARQ_SecuredGroupListQuery	U2A	Y	yes, but no visibility
154	SAC Data Queries	Object	Securities Account Party	SAQ_SecuritiesAccountTrailQuery	Both	Y	Y
155	SAC Data Queries	Object	Party	SAQ_SecuritiesAccountListQuery	Both	Y	Y
156	Dynamic Data Queries	Object	Securities Account Party	DDQ_SecuritiesAccountPositionQuery	Both	Y	Y
157	SAC Data Queries	Object	Securities Account Party	SAQ_SecuritiesAccountReferenceDataQuery	Both	Y	Y

158	Security Data Queries	Securities Audit Trail Query	Object	Security	SEQ_SecuritiesAuditTrailQuery	Both	Y	Y
159	Security Data Queries	Securities CSD Link Query	System	n/a	SEQ_SecuritiesCSDLinkQuery	Both	Y	Y
160	Security Data Queries	Securities Levitating Nominal Query	System	n/a	SEQ_SecuritiesDeviatNominalQuery	Both	Y	Y
161	Dynamic Data Queries	Securities Position Detailed Restriction Details Query	Object	Securities Account	DDQ_SecurPosDetailedRestrDetailsQu	U2A	Y	Y
162	Dynamic Data Queries	Securities Posting Query	Object	Securities Account	DDQ_SecuritiesPostingQuery	U2A	Y	Y
163	Security Data Queries	Securities Reference Data Query	System	n/a	SEQ_SecuritiesReferDataQuery	Both	Y	Y
164	Settlement General	Send new instruction using a specific instructing party	Object	Party	SIG_SIUIP	Both	Y	Y
165	Settlement General	Send New Settlement Instruction/Settlement Restriction on Securities either on a Securities Account or on Behalf of an external CSD	Object	Securities Account Party	SIG_SINDSI	Both	Y	Y
166	Settlement CSD	Send Settlement Instruction with non-modifiable flag activated	System	n/a	SIC_SINMF	Both	Y	Y
167	Billing Queries	Service Item Details Query	System	n/a	BIQ_ServiceItemDetailsQuery	U2A	Y	Y
168	Billing Queries	Service Item List Query	System	n/a	BIQ_ServiceItemListQuery	U2A	Y	Y
169	Dynamic Data Queries	Settlement instruction audit trail query	Object	Securities Account	DDQ_SettlInstruAuditTrailQuery	Both	Y	Y
170	Dynamic Data Queries	Settlement Instruction Current Status Query	Object	Securities Account	DDQ_SettlInstruCurrentStatusQuery	Both	Y	Y
171	Dynamic Data Queries	Settlement Instruction Query	Object	Securities Account	DDQ_SettlInstruQuery	Both	Y	Y
172	Dynamic Data Queries	Settlement Instruction Status Audit Trail Query	Object	Securities Account	DDQ_SettlInstruStatusAuditTrailQu	Both	Y	Y
173	Static Data Queries	System Entity Query	System	n/a	SDQ_SystemEntityQuery	U2A	Y	Y
174	Network Configuration	T2S BIC Query	System	n/a	NCQ_T2SBICQuery	U2A	Y	Y
175	Scheduling Queries	T2S Calendar Query	System	n/a	SCQ_T2SCalendarQuery	Both	Y	Y
176	Scheduling Queries	T2S Diary Query	System	n/a	SCQ_T2SDiaryQuery	Both	Y	Y
177	Access Rights Queries	T2S System User Link Query	System	n/a	ARQ_UserCertDNLinkQuery	U2A	Y	Y
178	Access Rights Queries	T2S System User Query (T2S Actor Query)	System	n/a	ARQ_T2SSysUserQueryT2SActorQuery	U2A	Y	Y
179	Network Configuration Queries	Technical Address Network Service Link Details Query	System	n/a	NCQ_DisplayTechAddressNetSerLink	U2A	Y	Y
180	Message Management	Third party receipt	Object	Party	MMA_ThirdPartyReceipt	Both	Y	Y
181	Static Data Queries	Tolerance Amount Query	System	n/a	SDQ_ToleranceAmountQuery	U2A	Y	Y
182	Dynamic Data Queries	Total Collateral Value per T2S Dedicated Cash Account Query	System	n/a	DDQ_TotalCollateralValuePerT2SDCAQuer	Both	Y	Y
183	Settlement CSD	Unlock CoSD Securities Blocking related to cancelled CoSD Settlement Instructions on Behalf of the relevant CSD in T2S	Object	Party	SIC_USBBI	Both	Y	Y
184	Market-Specific Configuration	Update Attribute Domain	System	n/a	MSC_UpdateAttributeDomain	U2A	Y	N
185	Market-Specific Configuration	Update Attribute Reference	System	n/a	MSC_UpdateAttributeReference	U2A	Y	N
186	Securities Account Data Manager	Update CMB Securities Account Link	System	n/a	SAC_UpdateCMBSecuritiesAccountLink	Both	Y	Y
187	Market-Specific Configuration	Update Conditional Security Delivery Rule	System	n/a	MSC_UpdateCondSecurDelivRule	U2A	Y	N
188	Market-Specific Configuration	Update Conditional Security Delivery Rule Set	System	n/a	MSC_UpdateCondSecurDelivRuleSet	U2A	Y	N
189	Securities Account Data Manager	Update CSD Account Link	System	n/a	SAC_UpdateCSDAccountLink	U2A	Y	N
190	Security Data Management	Update Eligible Counterpart CSD Link	System	n/a	SDM_UpdateEligibleCounterpartCSDLink	U2A	Y	N



191	Market-Specific Configuration	Update Market-Specific Attribute	System	n/a		MSC_UpdateMarket-SpecificAttribute	U2A	Y	N
192	Message Subscription	Update Message Subscription Rule	System	n/a		MSU_UpdateMessageSubscriptionRule	U2A	Y	Y
193	Message Subscription	Update Message Subscription Rule Set	System	n/a		MSU_UpdateMessSubscriptionRuleSet	U2A	Y	Y
194	Party Data Management	Update Party	Object	Party		PDM_UpdateParty	Both	Y	Y
195	Report Configuration	Update Report Configuration	System	n/a		RCO_UpdateReportConfiguration	U2A	Y	Y
196	Market-Specific Configuration	Update Restriction Type	System	n/a		MSC_UpdateRestrictionType	U2A	Y	N
197	Market-Specific Configuration	Update Restriction Type Rule	System	n/a		MSC_UpdateRestrictionTypeRule	U2A	Y	N
198	Access Rights Management	Update Role	System	n/a		ARM_UpdateRole	U2A	Y	N
199	Network Configuration	Update Routing	System	n/a		NCO_UpdateRouting	U2A	Y	Y
200	Access Rights Management	Update Secured Group	System	n/a		ARM_UpdateSecuredGroup	U2A	Y	N
201	Securities Account Data Manager	Update Securities Account	Object	Securities Account		SAC_UpdateSecuritiesAccount	Both	Y	Y
202	Security Data Management	Update Security	Object	Security		SDIM_UpdateSecurity	Both	Y	Y
203	Security Data Management	Update Security CSD Link	System	n/a		SDM_UpdateSecurityCSDLink	Both	Y	N
204	Network Configuration	Update Technical Address Network Service Link	System	n/a		NCO_UpdateTechnAddressNetServLink	U2A	Y	N
205	Access Rights Management	Update User	System	n/a		ARM_UpdateUser	U2A	Y	Y
206	Settlement ISO Codes	Use ISO transaction code AUTO (auto-collateralisation)	System	n/a		SII_UAUTO	Both	Y	Y
207	Settlement ISO Codes	Use ISO transaction code BSBK (buy sell back)	System	n/a		SII_UBSBK	Both	Y	Y
208	Settlement ISO Codes	Use ISO transaction code CLAI (market claim)	System	n/a		SII_UCLAI	Both	Y	Y
209	Settlement ISO Codes	Use ISO transaction code CNCB (central bank collateral operation)	System	n/a		SII_UCNCB	Both	Y	Y
210	Settlement ISO Codes	Use ISO transaction code COLI (collateral in)	System	n/a		SII_UCOLI	Both	Y	Y
211	Settlement ISO Codes	Use ISO transaction code COLO (collateral out)	System	n/a		SII_UCOLO	Both	Y	Y
212	Settlement ISO Codes	Use ISO transaction code CONV (depository receipt conversion)	System	n/a		SII_UCONV	Both	Y	Y
213	Settlement ISO Codes	Use ISO transaction code CORP (corporate action)	System	n/a		SII_UCORP	Both	Y	Y
214	Settlement ISO Codes	Use ISO transaction code ETFT (exchange traded funds)	System	n/a		SII_UEFTT	Both	Y	Y
215	Settlement ISO Codes	Use ISO transaction code FCTA (factor update)	System	n/a		SII_UFCTA	Both	Y	Y
216	Settlement ISO Codes	Use ISO transaction code INSP (move of stock)	System	n/a		SII_UINSP	Both	Y	Y
217	Settlement ISO Codes	Use ISO transaction code ISSU (issuance)	System	n/a		SII_UISSU	Both	Y	Y
218	Settlement ISO Codes	Use ISO transaction code MKDW (mark down)	System	n/a		SII_UMKDW	Both	Y	Y
219	Settlement ISO Codes	Use ISO transaction code MKUP (mark up)	System	n/a		SII_UMKUP	Both	Y	Y
220	Settlement ISO Codes	Use ISO transaction code NETT (netting)	System	n/a		SII_UNETT	Both	Y	Y
221	Settlement ISO Codes	Use ISO transaction code NSYN (non syndicated)	System	n/a		SII_UNSYN	Both	Y	Y
222	Settlement ISO Codes	Use ISO transaction code OWNE (external account transfer)	System	n/a		SII_UOWNE	Both	Y	Y
223	Settlement ISO Codes	Use ISO transaction code OWNI (internal account transfer)	System	n/a		SII_UOWNI	Both	Y	Y
224	Settlement ISO Codes	Use ISO transaction code PAIR (pair off)	System	n/a		SII_UPAIR	Both	Y	Y
225	Settlement ISO Codes	Use ISO transaction code PLAC (placement)	System	n/a		SII_UPLAC	Both	Y	Y
226	Settlement ISO Codes	Use ISO transaction code PORT (portfolio move)	System	n/a		SII_UPORT	Both	Y	Y
227	Settlement ISO Codes	Use ISO transaction code REAL (realignment)	System	n/a		SII_UREAL	Both	Y	Y
228	Settlement ISO Codes	Use ISO transaction code REDI (withdrawal)	System	n/a		SII_URED	Both	Y	Y
229	Settlement ISO Codes	Use ISO transaction code REDM (redemption)	System	n/a		SII_URED	Both	Y	Y

Settlement ISO Codes	Use ISO transaction code RELE (depository receipt release cancellation)	System	n/a	SII_URELE	Both	Y	Y
230							
231	Settlement ISO Codes Use ISO transaction code REPU (repo)	System	n/a	SII_UREPU	Both	Y	Y
232	Settlement ISO Codes Use ISO transaction code RODE (return delivery without matching)	System	n/a	SII_URODE	Both	Y	Y
233	Settlement ISO Codes Use ISO transaction code RVPO (reverse repo)	System	n/a	SII_URVPO	Both	Y	Y
234	Settlement ISO Codes Use ISO transaction code SBBK (sell buy back)	System	n/a	SII_USBBK	Both	Y	Y
235	Settlement ISO Codes Use ISO transaction code SBRE (borrowing reallocation)	System	n/a	SII_USBRE	Both	Y	Y
236	Settlement ISO Codes Use ISO transaction code SECB (securities borrowing)	System	n/a	SII_USECB	Both	Y	Y
237	Settlement ISO Codes Use ISO transaction code SECL (securities lending)	System	n/a	SII_USECL	Both	Y	Y
238	Settlement ISO Codes Use ISO transaction code SLRE (lending reallocation)	System	n/a	SII_USLRE	Both	Y	Y
239	Settlement ISO Codes Use ISO transaction code SUBS (subscription)	System	n/a	SII_USUBS	Both	Y	Y
240	Settlement ISO Codes Use ISO transaction code SYND (syndicate underwriters)	System	n/a	SII_USYND	Both	Y	Y
241	Settlement ISO Codes Use ISO transaction code TBAC (TBA closing)	System	n/a	SII_UTBAC	Both	Y	Y
242	Settlement ISO Codes Use ISO transaction code TRAD (trade)	System	n/a	SII_UTRAD	Both	Y	Y
243	Settlement ISO Codes Use ISO transaction code TRPO (triparty repo)	System	n/a	SII_UTRPO	Both	Y	Y
244	Settlement ISO Codes Use ISO transaction code TRVO (triparty reverse repo)	System	n/a	SII_UTRVO	Both	Y	Y
245	Settlement ISO Codes Use ISO transaction code TURN (turnaround)	System	n/a	SII_UTURN	Both	Y	Y

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