EUROPEAN CENTRAL BANK

EUROSYSTEM

General Information (Origin of Request) ☒ User Requirements (URD) ☒ Other User Functional or Technical Documentation (SYS)		
Request raised by: CSDR Task Force	**Institute:** ECB	**Date raised:** 10/02/2017
Request title: T2S Penalty Mechanism		**Request ref. no:** T2S 654 URD
Request type: Common	**Classification:** Regulatory requirement	**Urgency:** Fast-track
1. Legal/business importance parameter: High		**2. Market implementation efforts parameter:** Low
3. Operational/Technical risk parameter: Low		**4. Financial impact parameter:** Very high
Requestor Category:		**Status:** Implemented

Reason for change and expected benefits/business motivation:

The T2S CSDR Task Force was established by the T2S Steering level, in order to identify the necessary changes to the T2S platform resulting from the CSD Regulation (CSDR), with the objective to facilitate T2S CSDs' timely compliance to CSDR.

One of the core objectives of the CSDR is to promote settlement efficiency through a Settlement Discipline Regime, which, at the settlement layer, implies the payment of cash penalties for late settlement of transactions. Based on the Article 20 of the final RTS on Settlement Discipline[1], according to which CSDs that use a common settlement infrastructure shall "jointly establish […] and manage the modalities for calculation, application, collection and redistribution of cash penalties […]", it was decided at T2S Steering Level that the Eurosystem would offer a settlement penalty calculation mechanism.

The Eurosystem aims at providing a settlement penalty calculation mechanism compliant with CSDR requirements and in line with the design agreed by the T2S Governance. The new service shall be built upon the T2S platform, as T2S centralises all the necessary information for identification and reporting of settlement fails.

The T2S Penalty Mechanism focuses on the daily calculation and reporting of cash penalties for settlement fails, as well as the operational tools which are necessary for T2S Actors in this context. T2S shall also provide a monthly reporting of the aggregated amounts of cash penalties computed for a given month. This information may be used for the collection and redistribution process of cash penalties performed by CSDs outside T2S. T2S CSDs shall be able to subscribe to the penalty reports on an optional basis.

Certain aspects of the settlement penalty mechanism / obligations of CSDS vis-à-vis CSDR in this respect are not covered by the T2S Penalty Mechanism. In particular, the following processes are to be considered out of scope of the T2S Penalty Mechanism:

- Derivation of the list of financial instruments subject to penalties
- Monthly collection and redistribution of cash penalties (i.e. settlement of cash penalties)
- Reporting to competent authorities
- Reconciliation mechanisms and principles when two penalty systems calculate a different cash penalty for a transaction (e.g. in case of transaction with an External CSD subject to CSDR)
- Interaction with the buy-in process

In line with the approach agreed at the June 2018 CSD Steering Group (CSG)[2], the T2S Penalty Mechanism shall be available to T2S CSDs as any other T2S functionality. Similarly, it shall follow standard T2S pricing principles and levels whereby CSDs will pay according to their effective usage of the T2S Penalty Mechanism. Costs will mainly translate in the number of cash penalties reported (= business item), whereby the pricing applicable to the

[1] Link to published text in Official Journal of the European Union

[2] Presented in the document "Revised pricing proposal for T2S penalty mechanism"

already existing service items related to reports, queries as well as transmission costs shall apply. Incoming Flat files related to the Penalty Mechanism attract a one-off transmission fee and the content is not charged separately as messages bundled into a file. This is applicable for “Penalty Modification Requests”, “Securities subject to Cash Penalties” and “Cash Penalty Daily Price”. Also the enriched flat files sent back from T2S related to Penalty Mechanism (i.e. outgoing responses for “Penalty Modification Requests”, “Securities subject to Cash Penalties” and “Cash Penalty Daily Price”) attract a one-off transmission fee and the content is not charged separately as messages bundled into a file. While the T2S Penalty Mechanism is not subject to a separate cost recovery, dedicated service items shall be created in order to be able to track the costs and revenues generated by the service as per steering level (June CSG) decision. Those requirements shall be described as part of the detailed assessment of the CR.

As regards volumetric assumptions, since no regulatory certainty can be obtained at this stage, the current working assumption is to take a “worst case” scenario and consider in scope of the T2S Penalty Mechanism all T2S securities issued in EU countries. The 4CB will query the T2S database to perform the estimates, which will then be shared with CSDs for validation. For the dynamic data (number of penalties), 4CB will also query the T2S database to perform the estimates as follows:

- The daily average number of failed settlement instructions in T2S (please note that for the reporting of penalties, each penalty is reported to the failing and the non-failing party)

- The average number of settlement instructions sent late (with ISD before the business day the instruction is accepted in T2S) as well as the average number of days that the instructions are sent late.

Volumetric assumptions are a pre-condition to performing a detailed assessment of the penalty mechanism CR.

The T2S Penalty Mechanism requires the implementation of CR 600, CR 609, CR 621 and CR 640.

Description of requested change:

Chapter 3 – Processing schedule and calendar

T2S calendar- Cash penalties

Reference ID	T2S.03.365

T2S shall only perform the computation of cash penalties (as described in Chapter 22) on T2S settlement days, i.e. days where a settlement instruction can settle in T2S according to the T2S calendar.

Note: in case of a transaction involving settlement outside T2S, T2S is not aware of the opening days of external settlement systems and will compute a cash penalty on settlement days according to the T2S calendar. A dedicated functionality will be available in order for CSDs to be able to remove ex-post a penalty calculated by T2S as described in Chapter 22, section 22.5.1.

Frequency for computation of cash penalties

Reference ID	T2S.03.370

T2S shall perform the computation of cash penalties (as described in Chapter 22) on a daily basis (i.e. every business day).

Timing for computation of cash penalties

Reference ID	T2S.03.380

T2S shall perform the computation of cash penalties (as described in Chapter 22) for a business day after the end of this business day.

Note: the rationale for this requirement is that the computation of cash penalties must take into account all settlement instructions received on a specific business day, in particular for the application of Late Matching Fail Penalties.

Frequency for recalculation of existing cash penalties

Reference ID	T2S.03.390

T2S shall perform the required recalculation of already computed cash penalties (as described in Chapter 22) on a daily basis (i.e. every business day).

Timing for recalculation of existing cash penalties

Reference ID	T2S.03.400

T2S shall perform the required recalculation of already computed cash penalties on a daily basis (i.e. every business day) at the best suitable time in terms of performance and, at the latest, right after the computation of new penalties.

Frequency for reporting of cash penalties

Reference ID	T2S.03.410

T2S shall perform the reporting of cash penalties (as described in Chapter 13) on a daily basis (i.e. every business day).

Timing for reporting of cash penalties

Reference ID	T2S.03.420

T2S shall perform the reporting of cash penalties (as described in Chapter 13) for a business day, on the following business day, before the first real-time settlement cut-off.

Dependency between computation, recalculation and reporting of cash penalties

Reference ID	T2S.03.430

For a certain business day, T2S shall perform i) the reporting of new cash penalties (Daily Cash Penalty List as described in Chapter 13), following the process for computation of new cash penalties of that business day; and ii) the reporting of modified penalties (List of Modified Penalties as described in Chapter 13) following the recalculation process of that business day.

Dependency between computation and reporting of cash penalties with other tasks in the T2S schedule

Reference ID	T2S.03.440

The regular T2S settlement activity shall be independent from the computation, recalculation and reporting of cash penalties. The computation and reporting of cash penalties is based on settlement fails and always performed ex post.

Frequency for monthly reporting of aggregated amounts of cash penalties

Reference ID	T2S.03.450

T2S shall perform the reporting of monthly aggregated amounts of cash penalties (as described in Chapter 13) once a month, on the fourteenth business day of the month (considering business days as T2S opening days) for the penalties of the previous month.

Timing for monthly reporting of aggregated amounts of cash penalties

Reference ID	T2S.03.460

On the business days when there is a reporting of monthly aggregated amounts of cash penalties, T2S shall perform the monthly reporting at the best suitable time in terms of performance (e.g. Before the first real-time settlement cut-off).

Chapter 13 – Messages and reports requirements

13.5.2.4 Daily cash penalty list

Daily Cash Penalty List

Reference ID	T2S.13.320

T2S shall transmit to T2S actors the cash penalties computed for a given business day in a Daily Cash Penalty List. In case no penalty has been computed, T2S shall send the list informing 'no activity'.

The Daily Cash Penalty List should be based on an event.

Default data scope

Reference ID	T2S.13.330

T2S shall allow the relevant T2S Actor to receive cash penalties information under its default data scope:

- In case of a CSD, the information shall include the cash penalties that are either imposed or credited to all the parties belonging to the CSD data scope
- In case of a CSD participant (or an External CSD), the information shall include the cash penalties that are either imposed or credited to the CSD participant (or the External CSD).

Consequently, in case a DCP is an active participant of several CSDs, the DCP would have to configure and receive a Daily Penalty List for each CSD where it is active / defined as participant. The DCP will receive, in a different flow/message, one Daily Penalty List for each CSD it is active with.

The same applies to the List of Modified Penalties.

Daily Cash Penalty List general Structure

Reference ID	T2S.13.340

T2S shall report cash penalties sorted by currency and T2S party.

The Daily Cash Penalty List will transmit a cash penalty for a party when, during the computation process, it has been identified as either the failing or the non-failing party of the cash penalty, i.e. it has been imposed or credited with the cash penalty (as described in Chapter 22).

Additionally, T2S shall report cash penalties for a given currency and T2S party sorted by counterpart of the penalty.

Daily Cash Penalty List information

Reference ID	T2S.13.350

The Daily Cash Penalty List shall contain the following non-exhaustive information for each penalty reported for a given currency, T2S party and counterpart:

Table 13-5 – Daily Cash Penalty List information

Class of Information	Attributes
Cash penalty details	-Individual ID of the cash penalty -Common ID of the cash penalty -Type of cash Penalty (SEFP or LMFP) - Amount and debit/credit indicator of the cash penalty: o Currency and amount o Debit if the cash penalty is imposed to the party o Credit if the party is entitled to receive the cash penalty -Number of days for LMFP (for SEFP is always 1) -The relevant calculation details: o ISIN and classification details o Place of Trade o Security and/or Cash Discount Penalty rate for the relevant date o Foreign exchange details and quotation date
Related transaction details (i.e. details of the underlying settlement instruction)	-References: o T2S Actor Reference o T2S Reference o T2S matching reference o Common trade reference o Corporate action ID o Instructing party BIC (owner of the T2S Actor reference) -Other transaction details o ISO transaction code o Intended Settlement Date (ISD) o Securities account number o Securities account Owner o Securities movement type o Quantity (quantity of securities failed to be delivered) o Payment type code o DCA number (if against payment) o DCA's Owner BIC (if against payment) o Credit/Debit indicator (if against payment) o Currency and amount (if against payment - it is the cash amount failed to be delivered) o Acceptance and matching timestamps

	○ Information about the cut-off (event and time for the completion of the settlement processing related to the relevant cut-off of the instruction and reason for the instruction not being settled for SEFP)

The Daily Cash Penalty List shall provide per currency, T2S party and counterpart, the aggregated net amount of all the penalties reported for the given business day. More precisely this bilateral net amount for a party and counterpart will be:

- The sum of all cash penalties in this currency reported in the Daily Cash Penalty List that this party is entitled to receive (reported as credit) from the same counterpart (i.e. to be paid by this counterpart)

Minus

- The sum of all cash penalties in this currency reported in the Daily Cash Penalty List that are imposed to the party (reported as debit) and to be paid to the given counterpart

If the result is a positive amount, the daily bilateral net amount will be a credit for the party (i.e. an amount entitled from the counterpart) and if the result is a negative amount, the daily bilateral net amount will be a debit (i.e. an amount due to the counterpart).

Note: The daily aggregated net amount will be provided even in the case where the result of this bilateral net is zero. Nevertheless, T2S will provide the daily aggregated net amount per currency, T2S party and counterpart, only if there are penalties reported for this currency, T2S party and counterpart. Consequently, in case in the reporting of a given business day there are no penalties reported for a given currency, T2S party and counterpart, T2S will not provide the bilateral aggregated net amount.

A2A Format

Reference ID	T2S.13.360

The Daily Cash Penalty List shall comply with the ISO 20022 standards. The Daily Cash Penalty List shall be reported in the relevant semt.044 message format. Alternatively, for CSDs, the Daily Cash Penalty List may be reported in a flat file format i.e. CSDs shall be able to choose between semt.044 and flat file reporting.

A2A Reporting (push mode)

Reference ID	T2S.13.370

The Daily Cash Penalty List shall be available in A2A in push mode to CSDs and DCPs. This allows the T2S Actor to receive the Daily Cash Penalty List directly after its creation.

A2A Reporting (pull mode)

Reference ID	T2S.13.380

The Daily Cash Penalty List (in semt.044 format) shall be available in A2A in pull mode to CSDs and DCPs. This allows the T2S Actor to query the Daily Cash Penalty List in A2A at a later timing.

13.5.2.5 List of modified penalties

List of Modified Penalties

Reference ID	T2S.13.390

T2S shall transmit to T2S actors the modifications made in existing cash penalties that have occurred since the previous recalculation process, and make them available in a List of Modified Penalties.

The List of Modified Penalties should be based on an event.

The possible modifications that may occur in a penalty, and hence reported in the List of Modified Penalties, are:

- Whether a cash penalty has been removed, re-included, re-allocated or switched by a CSD (see Chapter 22.5), or
- Whether a cash penalty has been automatically updated by T2S after the recalculation of the penalty triggered by a change in the relevant reference data (see Chapter 22.6).

Note: The List of Modified Penalties provides the updates on previously computed penalties whereas the Daily Cash Penalty List is a different report that provides newly computed penalties.

Modification of penalties that were originally computed on different business dates

Reference ID	T2S.13.400

In order to transmit the modifications occurred on more than one cash penalty, when such penalties were originally computed on different business dates, T2S shall generate only one List of Modified Cash Penalties reporting all of them.

Note: The List of Modified Penalties reports together all the penalties modified since the last reporting even if they were originally computed on different business days. In case T2S does not have to report any penalty in the List of Modified Penalties, T2S shall send the list informing 'no activity'.

List of Modified Penalties Structure

Reference ID	T2S.13.410

T2S shall report the modified cash penalties following the same structure as described for the Daily Cash Penalty List in T2S.13.340. The difference is that the Daily Cash Penalty List refers always to one business day (the previous one), whereas the List of Modified Penalties provides information that may relate to several business days (i.e. in case the reported modified penalties were originally computed in different business days).

List of Modified Penalties information

Reference ID	T2S.13.420

The List of Modified Penalties shall provide, for each modified cash penalty, the same information (with updated values) as the one described for Daily Cash Penalty List in T2S.13.350, with the exception of the attributes in the "Other transaction details" block under "Related transaction details" that will not be provided again. I.e. From the details of the underlying settlement instruction, the List of Modified Penalties only provides the references of the instruction.

A2A Format

Reference ID	T2S.13.430

The List of Modified Penalties shall comply with the ISO 20022 standards. The List of Modified Penalties shall be reported in the relevant semt.044 message format. Alternatively, for CSDs, the List of Modified Penalties may be reported in a flat file format i.e. CSDs shall be able to choose between semt.044 and flat file reporting.

A2A Reporting (push mode)

Reference ID	T2S.13.440

The List of Modified Penalties (in both semt.044 format and flat file) shall be available in A2A in push mode to CSDs and DCPs. This allows the T2S Actor to receive the Daily Cash Penalty List directly after its creation.

A2A Reporting (pull mode)

Reference ID	T2S.13.450

The List of Modified Penalties (in semt.044 format only) shall be available in A2A in pull mode to CSDs and DCPs. This allows the T2S Actor to query the Daily Cash Penalty List in A2A at a later timing.

13.5.2.6 Monthly reporting of aggregated amounts of cash penalties

Monthly reporting of aggregated amounts of cash penalties

Reference ID	T2S.13.460

On the fourteenth business day of the month, T2S shall transmit to T2S actors the aggregated amounts of the cash penalties computed for the business days of the previous month:

- CSDs shall be able to receive the monthly aggregated amounts of all the parties in its scope
- CSD participants (or an External CSD) shall be able to receive the monthly aggregated amounts of the cash penalties of the previous month that were either imposed or credited to them.

When reporting the monthly aggregated amounts for the previous month, T2S will consider the last available value of the amount of each of the cash penalties to be aggregated, taking into account all the modifications performed on the cash penalties until, and including, the daily recalculation and reporting of modified cash penalties performed on the thirteenth business day of the current month.

Consequently, the monthly aggregated amounts will take into consideration all the corrections (penalties that have been removed, re-included, re-allocated, switched or automatically updated by T2S) made on the penalties to be aggregated since their initial computation and reporting until the end of their appeal processing period (which allows CSDs to make modifications until and including the twelfth business day of the month as described in T2S.22.370).

Monthly reporting of aggregated amounts of cash penalties, structure and information

Reference ID	T2S.13.470

The reporting of monthly aggregated amounts of cash penalties shall provide per currency and T2S party the bilateral net amounts for each of the counterparts of the cash penalties computed for the business days of the previous month.

Consequently, for each currency and party, T2S shall provide a monthly aggregated amount equal to:

- The sum of all cash penalties of the previous month in the relevant currency and that this party is entitled to receive (reported as credit) from the same counterpart (i.e. to be paid by this counterpart),

Minus;

- The sum of all cash penalties of the previous month in the relevant currency, that were imposed to this party (reported as debit), and to be paid to a given counterpart

If the result is a positive amount, the monthly bilateral net amount will be a credit for the party (i.e. an amount entitled from the counterpart) and if the result is a negative amount, the monthly bilateral net amount will be a debit (i.e. an amount due to the counterpart).

Note: The monthly bilateral net amounts of cash penalties of previous month shall be equal to the sum of the daily bilateral net amounts of the business days of the previous month (considering the updates that occurred since their reporting in the Daily Cash Penalty List and that T2S shall have provided in the List of Modified Penalties).

A2A Format

Reference ID	T2S.13.480

The reporting of monthly aggregated amounts of cash penalties shall comply with the ISO 20022 standards. The monthly aggregated amounts shall be reported in the relevant semt.044 message format. Alternatively, for CSDs, the monthly aggregated amounts may be reported in a flat file format i.e. CSDs shall be able to choose between semt.044 and flat file reporting.

13.5.2.7 Reporting of cash penalties involving a CCP

Reporting of cash penalties involving a CCP

Reference ID	T2S.13.490

For the Daily Cash Penalty List, the Modified List of Penalties, and the monthly reporting of aggregated amounts, T2S shall identify and flag in the report the T2S Parties or the counterparties of the penalty(ies) that are a Central Counterparty (CCP).

Chapter 14 – Queries requirements

14.8 Cash Penalty Queries

This section describes the options that CSDs have for querying cash penalties.

Availability of query and query mode

Reference ID	T2S.14.980

T2S shall allow CSDs to query cash penalties in user-to-application mode.

T2S shall not allow the user-to-application queries, neither during the maintenance window nor during the computation and recalculation processes. For queries sent during those periods, a message will be returned indicating that T2S is currently under maintenance or in the computation process.

Processing of queries

Reference ID	T2S.14.990

When processing cash penalty queries, T2S will only return results where the relevant CSD has the right to access the underlying data (i.e. the penalty is in its data scope as described in T2S.13.330).

14.8.1 Cash penalties query

14.8.1.1 Query parameters

Cash penalty query by reference

Reference ID	T2S.14.1000

This query shall allow CSDs to query cash penalties by the following references

- Individual identification of the cash penalty,
- Common identification of the cash penalty,
- T2S Actor Reference of the underlying settlement instruction,

- T2S Reference of the underlying settlement instruction,
- T2S Matching Reference of the underlying settlement instruction.

This query shall require at least one of the above.

Cash penalty query by ISIN

Reference ID	T2S.14.1010

T2S shall allow querying penalties associated to a given security and as of a specific date (i.e. computed on a given business day). For this purpose, the following parameters are allowed:

- Business day
- Security (ISIN code)
- Direction of the penalty (Debit, Credit, or both)
- Currency of the penalty
- Type of Penalty (SEFP, LMFP or both)
- Penalty status (active, removed, not computed or all) and reason ('re-allocated', 'switched', 'updated' and the standard codes approved by ESMA for removal of a penalty),

This query shall require the ISIN and the date as minimum search criteria.

When specifying the Business Day, it shall be allowed to specify a range/period (from/to).

Note: Limitations to the number of days will be provided in a second step at specifications phase depending on volumetric assumptions and performance impacts.

Cash penalty query by T2S Party

Reference ID	T2S.14.1020

T2S shall allow querying penalties that a party is imposed with or entitled to receive as of a specific date (i.e. computed on a given business day). For this purpose, the following parameters are allowed:

- Business day
- Party BIC
- Party Parent BIC
- Direction of the penalty (Debit, Credit or both)
- Currency of the penalty
- Type of Penalty (SEFP, LMFP or both)
- Penalty status (active, removed, not computed or all) and reason ('re-allocated', 'switched', 'updated' and the standard codes approved by ESMA for removal of a penalty),
- Counterpart BIC and parent BIC

This query shall require the Party BIC and the date as minimum search criteria.

When specifying the Business Day, it shall be allowed to specify a range/period (from/to).

Note: Limitations to the number of days will be provided in a second step at specifications phase depending on volumetric assumptions and performance impacts.

In order to determine the data scope of the query, T2S automatically considers the CSD associated to the user performing the query and return results according to the default data scope as described in T2S.14.990. Hence, the parameter Party Parent BIC is only relevant to query those penalties where the CSD itself is reported as failing or non-failing party (e.g. in a LMFP for which the CSD was the Instructing Party of the underlying settlement instruction that was sent already matched).

Cash penalty may be queried with multiple criteria

Reference ID	T2S.14.1030

T2S shall allow querying the penalties combining the parameters of the queries described in T2S.14.1010 (cash penalty query by ISIN) and T2S.14.1020 (cash penalty query by T2S Party). The query shall combine the parameters through AND logic.

In any case, when combined, the minimum search criteria of at least one of the two queries shall be respected.

Additionally, the Counterpart BIC and parent BIC can be used as search criteria only if the Party BIC is provided.

System entity wide cash penalty query

Reference ID	T2S.14.1040

T2S shall allow querying all the penalties in scope of a CSD as of a specific date (i.e. computed on a given business day). For this purpose, the following parameters are foreseen:

- Business day

- CSD BIC and system entity wide query flag
- Direction of the penalty (Debit, Credit or both)
- Currency of the penalty
- Type of Penalty (SEFP, LMFP or both)
- Penalty status (active, removed, not computed or all) and reason ('re-allocated', 'switched', 'updated' and the standard codes approved by ESMA for removal of a penalty),

This query shall require, as minimum search criteria, the CSD BIC, the system entity wide query flag and the date (range will not be allowed in this query and a single business day must be provided).

14.8.1.2 Query response

Cash penalties query response

Reference ID	T2S.14.1050

In respect of the parameters used, T2S shall return the relevant cash penalty(ies) information according to the CSD's default data scope.

The information provided will depend on the number of cash penalties returned:

Table 14-8-12-2 – Cash penalties query response

Penalty Queries	
Single cash penalty returned	T2S shall provide the following information: - Individual ID of the cash penalty - Common ID of the cash penalty - Type of cash Penalty (SEFP or LMFP) - Business Day when the penalty was computed - Amount and currency of the Penalty and also the direction (Debit or Credit) - Party BIC and parent BIC (The party is the failing or the non-failing party depending on the direction of the penalty i.e. if Debit it is the failing party; if Credit is the non-failing party) - Counterpart BIC and parent BIC (counterpart is the failing or the non-failing party depending on the direction of the penalty i.e. if Debit it is the non-failing party if Credit is the failing party) - Status and reason of the penalty - 'To be recalculated after being modified' flag - Number of days for LMFP (for SEFP is always 1) - The relevant calculation details: o ISIN and classification details o Place of trade o Security and/or Cash Discount Penalty rate for the relevant date o Foreign exchange details and quotation date - Underlying settlement instruction details: o T2S Actor Reference o T2S Reference o T2S matching reference o Common trade reference o Corporate action ID o Instructing party BIC o ISO transaction code o Intended Settlement Date (ISD) o Securities movement type o Securities account number o Securities Account owner o Quantity (quantity of securities failed to be delivered) o Payment type code

	○ DCA number (if against payment) ○ DCA's Owner BIC (if against payment) ○ Credit/Debit indicator (if against payment) ○ Currency and amount (cash amount failed to be delivered) ○ Acceptance and matching timestamps ○ Information about the cut-off For more information on the related settlement instruction, T2S shall provide the possibility to query it directly by the T2S reference.
Several cash penalties returned	T2S shall provide the following information: - Individual ID of the penalty - Common ID of the penalty - Type of penalty (SEFP or LMFP) - Business Day when the penalty was computed - Status and reason of the penalty - ISIN - Amount and currency of the Penalty and also the direction (Debit or Credit) - Party BIC and parent BIC (The party is the failing or the non-failing party depending on the direction of the penalty as provided in the amount i.e. if Debit it is the failing party; if Credit is the non-failing party) - Counterpart BIC and parent BIC (counterpart is the failing or the non-failing party depending on the direction of the penalty as provided in the amount i.e. if Debit it is the non-failing party if Credit is the failing party) - Related settlement instruction main references: ○ T2S Actor Reference of the Settlement Instruction ○ T2S Reference of the Settlement Instruction ○ T2S matching reference T2S shall provide the possibility to query each single penalty from the list in order to retrieve all its details.

14.8.2 Cash Penalty Audit Trail Query

Cash Penalty revision query

Reference ID	T2S.14.1060

The cash penalty audit trail query shall allow a T2S Actor to query the revision history of a penalty. For this purpose, the T2S Actor shall provide the Individual identification of the cash penalty.

14.8.3 Monthly aggregated amounts query

Monthly aggregated amounts query by T2S Party

Reference ID	T2S.14.1070

The monthly aggregated amounts query shall allow the retrieval of the monthly aggregated amounts of cash penalties for a given T2S party. For this purpose, the following parameters are allowed:

- Month (past 3 months)
- Party BIC
- Party Parent BIC
- Counterpart BIC and parent BIC
- Currency

This query shall require, as minimum search criteria, the month and the Party BIC.

The query of monthly aggregated amounts of the last month shall be allowed only once the Monthly reporting of aggregated amounts of cash penalties (described in chapter 13.5.2.4) has been produced.

Note: In order to determine the data scope of the query, T2S automatically considers the CSD associated to the user performing the query as the Party Parent BIC. Hence, the parameter Party Parent BIC is only relevant to

query the aggregated amounts of those penalties where the CSD itself is reported as failing or non-failing party (e.g. in a LMFP for which the CSD was the Instructing Party of the underlying settlement instruction that was sent already matched).

Chapter 16 – Static data requirements

Modification of existing introduction to the chapter (updates in this part are shown as underlined text when it is new or crossed when removed):

The aim of this chapter is to describe the set of requirements pertaining to the management of all static data in T2S. Static data mainly concern reference data about CSDs and T2S Parties, securities and cash accounts, and currencies.

The first part of this chapter (sections 16.1-16.5) defines a set of general requirements applicable for the management of each type of static data within T2S. More specifically, section 16.1.1 describes the high-level processes and interactions of T2S static data with T2S actors and other T2S processes. Then, section 16.2 specifies the requirements for uniquely identifying static data objects in T2S, while section 16.3 details the standardised tracking of states for static data management in T2S. Finally, section 16.4 provides the list of requirements for ensuring a full audit trail and a history of static data, and section 16.5 documents the standards applicable to the change management functions for all static data entities.

The second part of this chapter (sections 16.6-16.~~8~~9) describes the actual business reference data defined within T2S. More precisely, sections 16.6 and 16.7 respectively define reference data for currencies (e.g. currency code, currency name) and securities (e.g. ISIN, securities name, valuation). Section 16.8 describes the detailed reference data for parties, securities accounts and T2S dedicated cash accounts. More specifically, sections 16.8.1 and 16.8.2 describe the hierarchical model that defines the relationships between the parties in T2S. Section 16.8.3 specifies all information required for defining and processing a securities account in T2S, while section 16.8.4 includes requirements for T2S dedicated cash accounts of payment banks in T2S and their links with the relevant RTGS accounts. ~~Finally, s~~Sections 16.8.8 to 16.8.9 define some more technical requirements related to close links, cross-CSD settlement and parties' technical addresses needed by the settlement process (see chapter 7 for more details on settlement process requirements). Finally, section 16.9 describes the static data requirements for the management of cash penalties.

New sections and URs to be included in Chapter 16 (as in the rest of the document, the text below is not shown underlined because it always refers to new sections and URs):

16.9 Cash Penalties Static Data Management

16.9.1 Securities Subject to Cash Penalties

Definition

Reference ID	T2S.16.930

T2S shall use a list of securities that defines the scope of financial instruments subject to cash penalties. Each item of this list includes the following attributes:

- ISIN
- Financial Instrument Type (see T2S.16.940)
- Liquidity (see T2S.16.960)
- Valid From (date from which the item of the list is valid)
- Valid To (data until which the item of the list is valid)

Maintaining the list of Securities subject to cash penalties in T2S

Reference ID	T2S.16.935

Each CSD acting as a Securities Maintaining Entity (SME) shall be responsible for loading the list of securities subject to cash penalties in T2S and for keeping it up-to-date, along with all the relevant attributes, with the exception of the Financial Instrument Type attribute, which is automatically derived by T2S.

16.9.2 Types of Financial Instruments

Derivation of Financial instrument type

Reference ID	T2S.16.940

T2S shall derive the Financial Instrument Type for each security through a mapping with the Classification of Financial Instruments (CFI) code which is an existing attribute of an ISIN in T2S.

Table 16-9-2– Mapping between the CFI code and the Type of Financial Instruments:

CFI Code Structure	Type of Financial Instrument
Position 1 of the code is “E”	SHRS
Position 1 of the code is “D” and position 4 is “T” or “C”, or position 2 is “N”	SOVR
Position 1 of the code is “D”, position 2 is neither “Y” or “N” and Position 4 is neither “T” nor “C”	DEBT
Position 1 of the code is “R”	SECU
Position 1 of the code is “C” and position 2 is “E”	ETFS
Position 1 of the code is “C” and position 2 is not “E”	UCIT
Position 1 of the code is “D”, position 2 is “Y” and position 4 is neither “T” nor “C”	MMKT
Position 1 is "T", position 2 is "T" and position 3 is "N"	EMAL
Residual category	OTHR

Maintaining the CFI and Financial Instrument Type mapping table in T2S

Reference ID	T2S.16.950

The T2S application shall implement the mapping table allowing the derivation of the Financial Instrument Type of any given Security from it Classification of Financial Instruments (CFI).

16.9.3 Liquidity

Definition

Reference ID	T2S.16.960

The liquidity status is an attribute which reflects whether a security is liquid or illiquid. It is necessary for identifying the applicable penalty rate for a given settlement instruction and is only applicable for shares, i.e. Financial Instrument Type that has the value ‘SHRS’. The attribute values will be the following:

- Liquid
- Illiquid

16.9.4 SME Growth Market

Definition

Reference ID	T2S.16.970

The SME growth market is a list of Market Identifier Codes (MIC Identifiers) corresponding to trading venues (Place of Trade) that are identified as belonging to SME Growth Market segment. It is necessary for identifying the applicable penalty rate in the computation of a given cash penalty. Each item of this list includes the following attributes:

- MIC Identifier (according to ISO10383)

Maintaining the list of SME Growth Markets trading venues in T2S

Reference ID	T2S.16.980

The T2S Operator shall maintain the list of SME Growth Markets trading venues in T2S.

16.9.5 Rates

16.9.5.1 Security Penalty Rate

Definition

Reference ID	T2S.16.990

The security penalty rate shall be a list of applicable rates for each security's asset type. Each item of this list includes the following attributes:

- Asset Type
- Daily flat penalty rate
- Valid from

Maintaining the security penalty rate in T2S

Reference ID	T2S.16.1000

The T2S Operator shall maintain the list of securities penalties rates in T2S.

16.9.5.2 Cash Discount Penalty Rate

Definition

Reference ID	T2S.16.1010

The cash discount penalty rate is a list of applicable rates for each currency. Each item of this list includes the following attributes:

- Currency code
- Daily flat penalty rate (rate value i.e. discount rate of the currency)
- Valid from (date from which the rate value applies)

Maintaining the cash discount penalty rate in T2S

Reference ID	T2S.16.1020

The T2S Operator shall maintain the cash discount penalty rate for the euro and DKK in T2S.

Note: The source of this information will be ECB for Euro while as it should be the relevant central bank for other T2S settlement currencies, i.e. the Danish central bank for DKK.

Table 16-9-5 – Possible attribute combinations and applicable security and cash discount penalty rates:

Financial Instrument Type	Liquid/Illiquid	SME Growth Market[3]	Asset Type[4]	Daily Flat Penalty Rate
SHRS	Liquid	Not traded	Liquid Shares	1.0bp
SHRS	Illiquid	Not traded	Illiquid Shares	0.5bp
SHRS	Liquid or illiquid	Traded	SME Growth Market (non-Bonds)	0.25bp
SECU, ETFS, UCIT, EMAL, or OTHR	Not applicable	Traded		
DEBT, or MMKT	Not applicable	Not traded	Corporate Bonds	0.20bp

[3] This attribute is derived on a transactional basis and hence is described in Chapter 22.4 under T2S.22.145

[4] Combination of Type of Financial Instruments (derived with the CFI code mapping as per T2S.16.940), liquid/illiquid attribute of a share (as per T2S.16.960), and whether the instrument was traded on SME growth market (relevant for deriving SME Growth Market non-Bonds/Bonds penalty rates according to T2S.16.970).

Financial Instrument Type	Liquid/Illiquid	SME Growth Market[3]	Asset Type[4]	Daily Flat Penalty Rate
DEBT, or MMKT	Not applicable	Traded	SME Growth Market Bonds	0.15bp
SOVR	Not applicable	Traded or Not traded	Government and Municipal Bonds	0.10bp
SECU, ETFS, UCIT, EMAL, or OTHR	Not applicable	Not traded	Other financial instruments	0.5bp
Not applicable	Not applicable	Not applicable	Cash	Discount rate per currency with a floor of 0

16.9.6 Euro Foreign Exchange Reference Rate

Definition

Reference ID	T2S.16.1030

The Euro Foreign Exchange Reference Rate is a list of applicable rates for each currency against the Euro. Each item of this list includes the following attributes:

- Currency code
- Daily Exchange Rate
- Exchange Rate Date

Maintaining the Euro Foreign Exchange Reference Rate in T2S

Reference ID	T2S.16.1040

The ECB shall maintain the Foreign Exchange Reference for all relevant currencies against Euro in T2S according to ECB official exchange rates.

16.9.7 Daily prices

Definition

Reference ID	T2S.16.1050

The Daily Price is a list of prices that shall be used for the daily calculation of cash penalties. Each item of this list includes the following attributes:

- ISIN
- Price Date (date of validity of the price)
- Currency code
- Price (value of the price)

In case the price of a security subject to penalties is not provided, T2S shall consider the latest price available (i.e. the latest loaded in T2S).

Note: The reference price applicable in the static data for any given date T will have to take into account the possibility that, for day T, one (or many) price(s) may not be available and in those cases the price(s) to be considered is(are) the latest available (i.e. the latest loaded in T2S).

Maintaining the securities daily price in T2S

Reference ID	T2S.16.1060

Each CSD acting as a Securities Maintaining Entity (SME) shall be responsible for loading the securities daily prices in T2S and keeping them up-to-date.

Only the CSD responsible for loading the securities daily prices in T2S shall be able to query them.

Summary of the various static data updates that the responsible T2S Actor can perform

Responsible T2S Actor	Class of Information	Attribute	Updatable
CSD (acting as SME)	Securities Subject to Penalties	ISIN	No
		Financial Instrument Type	Yes
		Liquidity	Yes
		Valid From	No
		Valid To	Yes
CSD (acting as SME)	Daily Price	ISIN	No
		Price Date	No
		Currency Code	Yes
		Price	Yes
T2S Operator	SME Growth Markets	MIC Identifier	Yes
T2S Operator	Securities Penalty Rate	Asset Type	No
		Daily Flat Penalty Rate	Yes
		Valid From	No
T2S Operator	Cash Discount Penalty Rate	Currency Code	No
		Daily Flat Penalty Rate	Yes
		Valid From	No
ECB	Euro Exchange Reference Data[5]	Currency Code	No
		Daily Exchange Rate	Yes
		Exchange Rate Date	No

Chapter 22 Computation and Maintenance of Cash Penalties

22.1 Introduction

The T2S Penalty Mechanism focuses on the daily calculation and reporting of cash penalties for settlement fails, as well as the queries and operational tools which are necessary for T2S Actors in this context.

The user requirements related to the necessary schedule and calendar, the reporting, the queries and the reference data of cash penalties are described in the chapters 3, 13, 14 and 16 of the URD respectively.

The chapter below focuses on the user requirements necessary for the daily computation of cash penalties:

- Identification of settlement instructions eligible for cash penalties
- Calculation of cash penalties for those settlement instructions

This chapter describes also the user requirements for the possible updates on already computed penalties.

[5] A specific Data Migration Tool (DMT) file will be made available to the ECB as requested in CR718 to support the daily Euro Foreign Exchange Rate data loading process.

22.2 Scope of Cash Penalties

22.2.1 Securities subject to Cash Penalties

Securities subject to Cash Penalties

Reference ID	T2S.22.010

T2S shall compute cash penalties for settlement instructions on specific securities only. The scope of securities subject to cash penalties shall be determined via a list of financial instruments available in T2S, as described in T2S.16.930.

Note: The current assumption is that T2S will determine the scope of securities subject to penalties through a list it receives from an external Actor.

22.2.2 Instructions subject to Cash Penalties

Settlement Instruction Types subject to Cash Penalties

Reference ID	T2S.22.020

T2S shall compute cash penalties for the following T2S settlement instruction types:

- DVP/RVP: delivery or receipt versus payment
- DWP/RWP: deliver or receipt with payment
- DFP/RFP: deliver or receipt free of payment
- DPFOD/CPFOD: payment free of delivery debit or credit

Settlement Restrictions

Reference ID	T2S.22.030

Settlement restrictions shall be considered out of scope of the T2S Penalty Mechanism.

Note: T2S shall not compute cash penalties for any settlement restriction, whether sent by T2S Actors or generated by T2S.

Settlement Instructions generated by T2S for realignment

Reference ID	T2S.22.040

Settlement instructions automatically generated by T2S for realignment purposes shall be considered out of scope of the T2S Penalty Mechanism.

Note: T2S shall not compute cash penalties for any realignment settlement instruction generated by T2S but shall compute cash penalties for other types of settlement instructions generated by T2S, inter alia auto-collateralisation, and reverse auto-collateralisation instructions.

Transaction Types subject to Cash Penalties

Reference ID	T2S.22.050

T2S shall compute cash penalties for settlement instructions sent by T2S Actors and populated with any ISO transaction type code, except for settlement instructions populated with “CORP” ISO transaction code.

Note: All transaction types shall be subject to cash penalties (both Settlement Fail Penalties and Late Matching Fail Penalties), except Corporate Actions on Stock.

22.3 Currency

Denomination Currency for Cash Penalties

Reference ID	T2S.22.060

T2S shall compute cash penalties in a T2S settlement currency:

- For settlement instructions against payment (cash settlement in a T2S settlement currency), the amount imposed by the cash penalty shall be denominated in the currency of the cash leg of the settlement instruction;
- For free of payment settlement instructions (no cash is settled in T2S), the amount imposed by the penalty shall be calculated in either the currency of the underlying security if the Settlement Type stored in Static data is nominal, or in the currency of the daily reference price if the Settlement Type of the underlying security is units. If this is not a T2S Settlement currency, it should be calculated in EUR.

Exchange rate for cash penalties

Reference ID	T2S.22.070

T2S shall apply the exchange rate (described in UR T2S.16.1030) in order to compute the amount of a cash penalty if the denomination price of the ISIN is different from the currency derived in T2S.22.060

22.4 Computation

22.4.1 Settlement Fail Penalty (SEFP)

Settlement Fail Penalties penalise a non-execution or failure of settlement after the completion of the settlement processing of the relevant cut-off on or after ISD. It is calculated for each business day the settlement instruction fails in T2S. It does not matter whether a settlement instruction has failed to settle for e.g. lack of securities or lack of cash, or if it has not been submitted to a settlement attempt due to e.g. being on hold. Cash penalties shall apply independently of the reason for non-successful settlement in T2S.

Eligibility for SEFP

Reference ID	T2S.22.080

T2S shall consider a settlement instruction eligible to a Settlement Fail Penalty (SEFP) for a business day if it fulfils all of the following conditions:

- It has reached its Intended Settlement Date (ISD) and;
- It is matched before the completion of the settlement processing of the relevant cut-off of the instruction on that business day, i.e. 16:00 for DVP, 17:40 for bilaterally agreed treasury management and monetary policy operations, and 18:00 for FOP settlement, and;
- It is unsettled, because it failed the eligibility/provision check with any reason associated to the instruction and not to the counterpart´s instruction, by the end of the settlement processing of the relevant cut-off of the instruction on that business day and;
- It is not cancelled, by the end of the settlement processing of the relevant cut-off of the instruction on that business day.

Failing and non-failing party in SEFP

Reference ID	T2S.22.090

When computing a SEFP, T2S shall identify the failing and the non-failing party for the T2S reporting and storage of the penalty, i.e. respectively the party imposed with the penalty and the party credited with the penalty.

- The failing party will be the account owner of the securities account of the underlying settlement instruction for which the SEFP is computed, whereas the non-failing party will be the securities account owner of the counterpart´s settlement instruction.

Note: Each penalty will have a common identification assigned by T2S that can be used for reconciliation on both sides (by the failing and by the non-failing party). Additionally, T2S will provide an individual identification of the penalty to each counterpart. It is worth clarifying that, when reporting a cash penalty, only two of these three identifications are reported together, i.e. the Common Id of the penalty and the relevant Individual Id for the party that is addressed in the report (either the failing or the non-failing party).

External CSD settlement in T2S

Reference ID	T2S.22.100

In external CSD settlement scenarios for which a SEFP is computed in T2S, T2S will consider the “External CSD” as the securities account owner of the relevant settlement instruction. Given that the participants of an “External CSD” are not known by T2S (i.e. they are not T2S parties), T2S shall consider the “External CSD” as the securities account owner of the relevant settlement instruction.

Note: An External CSD (CSD not participating in T2S) is defined as a specific party type “External CSD” by a CSD participating in T2S (with which it has established a legal relationship outside T2S). An "External CSD" T2S party is considered as similar to a CSD Participant of the CSD in T2S.

In this context, “External CSD settlement instructions” are those, whose depository is an External CSD, i.e.:

- Delivering settlement instructions whose Delivering Depository is an External CSD
- Receiving settlement instructions whose Receiving Depository is an External CSD

Relevant status of the instruction for computation of SEFP

Reference ID	T2S.22.110

T2S shall consider the processing status and reason(s) of a settlement instruction that is eligible for SEFP at the end of the settlement processing of the relevant cut-off of the instruction.

Note: T2S shall not take into account previous statuses or reasons before the relevant cut-off, neither statuses nor reasons after the relevant cut-off, e.g. if the settlement instruction is cancelled after the relevant cut-off. T2S shall compute SEFP according to different parameters based on the type of settlement instruction.

Number of days considered in the computation of SEFP

Reference ID	T2S.22.115

A given SEFP always applies to a single business day i.e. when the settlement instruction failed to settle in T2S.

In case the security of the settlement instruction is not subject to cash penalties in the applicable business day of the SEFP, T2S shall record the penalty with ''Not computed'' status, but not report it.

Note: A given SEFP always applies to a single business day, but a settlement instruction may have several SEFPs if it fails to settle in T2S on several business days. Each SEFP will be computed for each business day the settlement instruction fails in T2S.

Computation of SEFP for a failing DVP, failing DFP or failing RFP

Reference ID	T2S.22.120

SEFP = Security Penalty Rate* Reference Price* Quantity, where;

Security Penalty Rate is the penalty rate stored in Static Data (as described in table 16-19-5) for the relevant asset type (derived from the ISIN and place of trade) and the business day for which the penalty is calculated;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the business day for which the penalty is calculated.

Quantity is the quantity of securities failed to be delivered, which is the quantity of the instruction remaining to be settled at the time of end of processing of the relevant cut-off.

Computation of SEFP for a failing RVP

Reference ID	T2S.22.121

SEFP = Cash Discount Penalty Rate* Reference Price* Quantity, where;

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and the business day for which the penalty is calculated;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the business day for which the penalty is calculated.

Quantity is the quantity of securities failed to be delivered, which is the quantity of the instruction remaining to be settled at the time of end of processing of the relevant cut-off.

Computation of SEFP for a failing DPFOD or a failing CPFOD

Reference ID	T2S.22.130

SEFP = Cash Discount Penalty Rate* Amount, where:

Cash Discount Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and the business day for which the penalty is calculated.

Amount is the cash amount failed to be delivered, which is the amount of the instruction remaining to be settled at the time of end of processing of the relevant cut-off.

Computation of SEFP for a failing DWP or a failing RWP

Reference ID	T2S.22.140

SEFP = Security Penalty Rate* Reference Price* Quantity + Cash Discount Penalty Rate* Amount, where:

Security Penalty Rate* Reference Price* Quantity is derived as described in T2S.22.120 and;

Cash Discount Penalty Rate* Amount is derived as described in T2S.22.130.

Table 22-4 – Calculation of SEFP according to each settlement instruction type

Type of Settlement Instruction	**SEFP**
Delivering versus Payment (DVP) Delivering Free of Payment (DFP) Receiving Free of Payment (RFP)	Penalty based on the quantity of securities failed to be delivered and Security penalty rate of the relevant asset type
Receiving versus Payment (RVP)	Penalty based on the quantity of securities failed to be delivered and the discount rate of the relevant currency
Debiting Payment Free of Delivery (DPFOD) Crediting Payment Free of Delivery (CPFOD)	Penalty based on the amount of cash failed to be delivered and the penalty rate will be the discount rate of the relevant currency

Delivery with Payment (DWP) Receiving with Payment (RWP)	Penalty will be the sum of: - The penalty based on the quantity of securities failed to be delivered and Security penalty rate of the relevant asset type, and; - The penalty based on the amount of cash failed to be delivered and the discount rate of the currency

Derivation of whether a transaction was traded on an SME growth market

Reference ID	T2S.22.145

In order to identify the asset type and, consequently, the applicable Security penalty rate, T2S needs to derive whether the transaction was traded on an SME growth market.

T2S shall consider that a transaction was traded on an SME growth market if the value of the MIC field informed in the 'Place of Trade' of the two settlement instructions is i) equal i.e. both, the settlement instruction of the failing party and the settlement instruction of the non-failing party, informed the same value; and ii) corresponds to a SME growth market trading venue stored in T2S Static Data (as described in T2S.16.970).

Note: The same applies for LMFPs.

Reference price used for computation of SEFP

Reference ID	T2S.22.150

T2S shall use the reference price of the business day where the settlement instruction is eligible for SEFP, independently of the business day where the calculation is performed.

Note: T2S will perform the computation of SEFP for a specific business day on the next business day; therefore this requirement ensures that the reference price used for the computation is the one of the business day where the instruction is subject to a cash penalty.

22.4.2 Late Matching Fail Penalty (LMFP)

Late Matching Fail Penalties penalise the late sending of settlement instructions that prevents timely settlement of a transaction. They, are calculated only once by T2S, on the business day when they are matched, but considering all the previous days where the instruction did not settle due to the late matching of the instruction.

Eligibility of instructions "to be matched" in T2S for LMFP

Reference ID	T2S.22.160

T2S shall consider a settlement instruction that is "to be matched" in T2S eligible for a Late Matching Fail Penalty (LMFP) if it fulfils all of the following conditions:

- It is matched in T2S at a point in time when it is no longer possible to settle it on Intended Settlement Date;
- It has an accepted timestamp in T2S greater than its counterpart matched instruction

Eligibility of instruction entering T2S as "already matched" for LMFP

Reference ID	T2S.22.170

T2S shall consider an already matched instruction eligible for a Late Matching Fail Penalty (LMFP) if it fulfils the following condition:

- It is accepted in T2S at a point in time when it is no longer possible to settle it on Intended Settlement Date.

In case of already matched instructions, where the accepted timestamp in T2S is the same for both instructions, T2S shall compute one penalty and apply it to the Instructing Party.

Failing and Non-failing Party in LMFP

Reference ID	T2S.22.180

When computing a LMFP, T2S shall identify the failing and the non-failing party for the reporting and storage of the penalty, respectively the party debited with the penalty and the party credited with the penalty.

- In case of instructions to be matched in T2S, the failing party will be the securities account owner of the underlying settlement instruction for which the penalty is computed, whereas the non-failing party will be the securities account owner of the counterpart´s settlement instruction.
- In case of already matched instructions, the instructing party of the underlying already matched instruction will be both the failing and the non-failing party.

Note: Given that in settlement instructions sent to T2S as already matched, the accepted timestamp is the same for both legs, the information for identifying the last participant to enter the relevant settlement instruction is not available in T2S. Therefore, T2S assigns the penalty to the Instructing party as both the failing and the non-failing party.

External CSD settlement in T2S

Reference ID	T2S.22.190

In external CSD settlement scenarios for which a LMFP is computed, T2S will consider the "External CSD" as the securities account owner of the relevant settlement instruction.

Note: Given that the participants of an "External CSD" are not known by T2S (i.e. they are not T2S parties), T2S shall consider the "External CSD" as the securities account owner of the relevant settlement instruction.

Number of days considered in the computation of LMFP

Reference ID	T2S.22.200

In the computation of a LMFP, T2S shall consider each business day where the settlement instruction was due to settle according to the T2S calendar, i.e. all the business days where the LMFP is applicable.

The business days where the LMFP is applicable shall be:

- The business days as from the ISD until, and including, the business day where the instruction is matched (when the instruction is matched at a point in time of the business day which is after the end of the settlement processing of the relevant cut-off);
- The business days as from the ISD until, and excluding, the business day where the instruction is matched (when the instruction is matched at a point in time of the business day which is prior to the end of the settlement processing of the relevant cut-off)

The LMFP shall be the sum of the amounts calculated for each applicable business day. The parameters and derivation logic for the computation is described in URs T2S.22.210, T2S.22.220, T2S.22.230, T2S.22.231 and T2S.22.232.

Note: The business day where the settlement instruction is matched shall be excluded when matching took place prior to the end of the settlement processing of the relevant cut-off, because if it does not settle on this business day, the instruction shall be then eligible for a SEFP.

In case the security of the settlement instruction is not subject to cash penalties in all the applicable business days of the LMFP, T2S shall record the penalty with ''Not computed'' status, but not report it.

In case the security of the settlement instruction is subject to cash penalties at least in one of the applicable business days of the LMFP, T2S will compute the cash penalty based on applicable business days for which the security is subject to penalties.

Computation of LMFP for a DVP, a DFP or a RFP received late

Reference ID	T2S.22.210

LMFP = Security Penalty Rate* Reference Price* Quantity, where;

Security Penalty Rate is the penalty rate stored in Static Data (as described in table 16-19-5) for the relevant asset type (derived from the ISIN and place of trade) and the relevant business day;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the relevant business day.

Quantity is the quantity of securities failed to be delivered, which is the matched quantity of the instruction.

Computation of LMFP for a DPFOD or CPFOD received late

Reference ID	T2S.22.220

LMFP = Cash Discount Penalty Rate* Amount, where:

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and the relevant business day.

Amount is the cash amount failed to be delivered, which is the matched amount of the instruction.

Computation of LMFP for a DWP or a RWP received late

Reference ID	T2S.22.230

LMFP = Security Penalty Rate* Reference Price* Quantity + Cash Discount Penalty Rate* Amount, where:

Security Penalty Rate* Reference Price* Quantity is derived as described in T2S.22.210 and;

Cash Discount Penalty Rate* Amount is derived as described in T2S.22.220.

Computation of LMFP for a RVP received late and matched in T2S

Reference ID	T2S.22.231

LMFP = Cash Discount Penalty Rate* Reference Price* Quantity, where;

Cash Discount Penalty Rate is the discount rate of the relevant currency stored in Static Data (as described in T2S.16.1010) and the business day for which the penalty is calculated;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the relevant business day.

Quantity is the quantity of securities failed to be delivered, which is the matched quantity of the instruction.

Computation of LMFP for a RVP received late and as an already matched instruction

Reference ID	T2S.22.232

In the case of a RVP received as an already matched instruction, T2S shall consider:

LMFP = Security Penalty Rate* Reference Price* Quantity, where;

Security Penalty Rate is the penalty rate stored in Static Data (as described in table 16-19-5) for the relevant asset type (derived from the ISIN and place of trade) and the relevant business day;

Reference Price is the price stored in Static Data for the ISIN of the instruction and the relevant business day.

Quantity is the quantity of securities failed to be delivered, which is the matched quantity of the instruction.

Reference price used for computation of LMFP

Reference ID	T2S.22.240

T2S shall use the reference price of each business day where the settlement instruction was due to settle, i.e. the reference price from each relevant business day from ISD until the matching business date. The maximum period where historical prices can be considered is 3 calendar months, i.e. the period the reference data remains in the system without being purged.

Consequently, in case a settlement instruction is matched in T2S with an ISD more than 3 calendar months in the past, T2S will compute the LMFP:

- Using the prices available for the business days within the last 3 calendar months and;
- For the prices for the business days before the last 3 calendar months that are not available because these prices have already been purged, T2S will use in the computation of the penalty the oldest price available.

22.4.3 Data revision and retention period

Audit trail

Reference ID	T2S.22.250

T2S shall store revision history documenting the changes occurred in a penalty in T2S. This shall indicate the date and time of every change and the unique identifier of the T2S system user making the change (see Chapter 22.5 for further information)

Note: This requirement ensures that the different actions impacting a cash penalty are logged and available in T2S.

Retention period

Reference ID	T2S.22.260

Like other dynamic data, cash penalties (including their data revisions) shall be purged after 3 calendar months. In order to have the same purging date for all penalties computed on business days of the same month; the penalties shall be purged after 3 calendar months from the business day when the relevant monthly reporting is produced by T2S.

Cash penalties shall also be stored in Long Term Statistics (LTSI), archived in Legal Archiving (LEA) and provided on request according to the LEA rules.

22.5 Update of existing cash penalties by CSDs (removal/ re-inclusion/ re-allocation/ switch)

The T2S Penalty Mechanism provides the CSDs with tools to make ex-post updates/corrections on the cash penalties computed. As a general rule, only the CSD of the failing party is allowed to perform updates on a cash penalty and, as long as they are requested in the allowed time frame (also known as appeal processing period). The updates a CSD may perform on a cash penalty are:

- Removal of a cash penalty: in cases foreseen in the CSDR framework where settlement cannot be performed for reasons that are independent from any of the CSD participants or the CSD, the cash penalty shall not be charged. In such cases, the CSD shall be able to remove the cash penalty computed.
- Re-inclusion of a previously removed cash penalty: to cater for mistakes in the removal of penalties, T2S shall allow the CSD to re-include a penalty that has been previously removed.
- Re-allocation of a LMFP from the instructing party to the delivering/receiving party: this functionality caters for the rare cases where an already matched settlement instruction is sent late to T2S and, consequently, a LMFP is computed and assigned to the Instructing Party as both the failing party and non-failing party (T2S.22.180). T2S does not have the information for identifying the last participant to enter the relevant instruction, but the Instructing Party does. Hence, in such case, the CSD shall be able to re-allocate the penalty from the initially assigned failing and non-failing party (i.e. the Instructing party) to the delivering party and the receiving party of the instruction (i.e. as the actual failing party or the non-failing party)

- Switch between the failing and non-failing party of a cash penalty: this functionality caters inter alia for cases where a transaction is settled on multiple platforms, i.e. where settlement on T2S depends on the fulfilment of a condition outside T2S. For example, when cash settlement takes place outside T2S while the settlement of securities takes place in T2S, conditional securities deliveries (CoSD) may be used by T2S Actors to block the securities in T2S until cash settlement takes place on the relevant platform. Depending on the CoSD configuration and the business scenario, T2S could compute and assign the penalty to the incorrect party (i.e. to the delivering instead of to the receiving participant or vice versa), e.g. because the free-of-payment delivery in T2S is failing, while as it is due to the lack of cash of the counterparty on the external cash settlement platform. Hence, in order to allow the CSD to make the required ex-post correction, the CSD shall be able to swap the failing party and the non-failing party of the cash penalty.

22.5.1 Removal of a cash penalty

Removal of a cash penalty

Reference ID	T2S.22.300

T2S shall allow a CSD to remove an existing cash penalty by reducing the amount to zero.

Removal of a cash penalty validation

Reference ID	T2S.22.310

In the event of a request for removal of a penalty (U2A or A2A), T2S shall check that the penalty provided in the request with the Individual ID: exists, is active and is a debit.

T2S shall also check that the removal is requested in the allowed timeframe (see T2S.22.440).

T2S shall also check that the CSD requesting the removal of the penalty using the Individual ID is the CSD of the participant to whom the penalty is imposed to.

Provision of a penalty removal reason

Reference ID	T2S.22.320

T2S shall require the CSDs to include one of the standard codes defined by ESMA of the reason why the cash penalty is removed. Additionally the CSDs may include a description (free text).

Status after removal of a cash penalty

Reference ID	T2S.22.330

T2S shall reflect the removal of an existing cash penalty by storing the penalty (for both the failing and the non-failing participant) with the following attributes:

- Status ‘’removed’’;
- The standard code and description of the reason why the removal is performed by the CSD;
- Amount of the cash penalty reduced to zero.

Note: When the removal of a penalty is performed, the failing and the non-failing participant will be informed that the penalty has been removed in the next reporting via the List of Modified penalties.

22.5.2 Re-inclusion of a previously removed cash penalty

Re-inclusion of a previously removed cash penalty

Reference ID	T2S.22.340

T2S shall allow a CSD to re-include a cash penalty that was previously removed. When doing so, T2S shall restore the amount of the penalty (reintroduce the amount when the penalty was removed) and to trigger the recalculation of the cash penalty in the next recalculation process.

Re-inclusion of a previously removed cash penalty validation

Reference ID	T2S.22.350

In the event of a request for re-inclusion of a penalty (U2A or A2A), T2S shall check that the penalty provided in the re-inclusion request with the Individual ID: exists and has been previously removed by the CSD with the removal functionality (T2S.22.300, T2S.22.320 and T2S.22.330).

T2S shall also check that the re-inclusion is requested in the allowed timeframe (see T2S.22.440).

T2S shall check that the CSD requesting the re-inclusion of the penalty using the Individual ID is the CSD of the participant to whom the penalty was imposed to.

Status after re-inclusion of cash penalty

Reference ID	T2S.22.360

T2S shall reflect the re-inclusion of an existing cash penalty that has been previously removed with the following attributes (for both the failing and the non-failing participant):

- Status 'active';
- A reason code to reflect the re-inclusion, e.g. 'updated';
- Amount of the cash penalty as it was when the penalty was removed.

Additionally after the re-inclusion of the cash penalty, T2S shall flag the penalty as 'to be recalculated after being modified'. This flag shall remain active until the next recalculation process so in case a CSD performs a query during this period, the CSD is aware that the cash penalty has to be re-calculated.

Note: After re-inclusion of a penalty, T2S has to calculate again the amount of the penalty as it may have changed due to updates in the reference data while it was removed. This recalculation will be performed in the next T2S daily recalculation process and will be triggered thanks to the flag 'to be recalculated after being modified'.

The failing and the non-failing participant will be informed of the re-inclusion and recalculation of the penalty in the next reporting via the List of Modified penalties.

22.5.3 Re-allocation of a Late Matching Fail Penalty (LMFP)

Re-allocation of a LMFP from the instructing party to the delivering/receiving party

Reference ID	T2S.22.370

In case of Late Matching Fail Penalties (LMFPs) computed for settlement instructions received in T2S as already matched, T2S shall allow the re-allocation of the cash penalty from the initially assigned failing and non-failing party (i.e. the instructing party) to the delivering party and the receiving party of the instruction (i.e. being assigned as either the actual failing party or the non-failing party).

Re-allocation validation

Reference ID	T2S.22.380

In the event of a request for re-allocation of a penalty (U2A or A2A), T2S shall check that the penalty provided in the request with the Common ID (not the individual like in other cases): exists, is active, and also is a LMFP that has not been re-allocated before.

T2S shall also check that the re-allocation is requested by the CSD of the failing party of the penalty (i.e. the CSD of the Instructing party), and that the re-allocation is requested in the allowed timeframe (see T2S.22.440)

In addition, T2S shall check that the two parties (BICs provided in the request) being re-allocated with the penalty (i.e. the new failing and non-failing parties) are the delivering party and the receiving party of the underlying settlement instruction that was sent to T2S as already matched.

Note: A re-allocation request shall be sent by the CSD and contain the common ID of the penalty, as well as the information on the new failing and non-failing parties to be assigned with the penalty.

Status after re-allocation of a cash penalty

Reference ID	T2S.22.390

T2S shall reflect the re-allocation of an existing cash penalty by storing the penalty (for the initial failing and non-failing party) with the following attributes:

- Status 'removed';
- A reason code to reflect the re-allocation, e.g. 're-allocated'.

And by storing a new penalty for the new failing and non-failing parties as:

- Status 'active';
- A reason code to reflect the re-allocation, e.g. 're-allocated'
- Reference of the original penalty that has been re-allocated

Additionally after the re-allocation of the cash penalty, T2S shall flag the new active penalty as 'to be recalculated after being modified'. This flag shall remain active until the next recalculation process so in case a CSD performs a query during this period, the CSD is aware that the cash penalty has to be re-calculated.

Note: After re-allocation of a LMFP, T2S has to calculate again the amount of the penalty as it may have changed in case the receiving participant is assigned as the new failing party (because a different formula for calculating the penalty may apply, see T2S.22.210 and T2S.22.232). This recalculation will be performed in the next T2S daily recalculation process and will be triggered thanks to the flag 'to be recalculated after being modified'.

When the re-allocation of a LMFP is performed, the new failing and non-failing participants will be informed of the re-allocation and recalculation of the penalty in the next reporting via the List of Modified penalties. After the re-allocation, also the Instructing party of the already matched instruction (i.e. the original failing and non-failing

participant) will be informed, in the next reporting, via the List of Modified Penalties, that the penalty has been re-allocated and is no longer applicable for this party (i.e. removed from this party´s point of view).

22.5.4 Switch between the failing and the non-failing of a cash penalty

Switch between the failing and non-failing party of a cash penalty

Reference ID	T2S.22.400

T2S shall allow the switch between the failing and the non-failing party of a cash penalty.

Switch between failing and non-failing party a cash penalty validation

Reference ID	T2S.22.410

In the event of a request (U2A or A2A) for switch of the failing and non-failing party of a cash penalty, T2S shall check that the penalty provided in the request with the Individual ID: exists, is active and is a debit.

T2S shall also check that it is requested by the CSD of the participant to whom the penalty was imposed to, and that the switch is requested in the allowed timeframe (see T2S.22.440)

Note: Contrary to the re-allocation of a cash penalty, for the switch between the failing and non-failing party, the parties (i.e. the two BICs) do not need to be provided by the CSD, it is sufficient to provide the Individual ID and the request type ‘switch’.

Provision of a penalty switch reason

Reference ID	T2S.22.420

T2S shall require the CSDs to include a description (free text) of the reason why the cash penalty is switched.

Note: The switch of the failing and non-failing party of cash penalties shall follow certain rules which are expected to be described at the level of ECSDA framework. Hence, no further validation is put in place in T2S.

Status after switch of a cash penalty

Reference ID	T2S.22.430

T2S shall reflect the switch of a cash penalty by storing the penalty with the failing and the non-failing parties swapped, i.e. the previous party debited (imposed) with the penalty is now credited (entitled to receive the penalty) and vice versa, and with the following attributes:

- Status ‘active’;
- A reason code to reflect the switch of penalty, e.g. ‘switched’;
- The description of the reason why the switch is performed by the CSD.

Additionally after a switch of a cash penalty, T2S shall flag the penalty as ‘to be recalculated after being modified’. This flag shall remain active until the next recalculation process, so in case a CSD performs a query during this period, the CSD is aware that the cash penalty has to be re-calculated.

Note: After the failing and non-failing participants of a penalty have been switched, T2S has to calculate again the amount of the penalty as it may have changed when the receiving participant of the underlying instruction becomes the failing party instead of the non-failing or vice versa (because a new formula for calculating the penalty may apply, see table 22-4). This recalculation will be performed in the next T2S daily recalculation process and will be triggered thanks to the flag ‘to be recalculated after being modified’.

When the switched of the failing and non-failing parties of a penalty is performed, both the failing and the non-failing participant will be informed that the penalty has been switched in the next reporting via the List of Modified Penalties (i.e. informing that the failing party of the cash penalty is now the non-failing party and vice versa) .

22.5.5 Common requirements for the updates performed by a CSD on a cash penalty

Allowed timeframe for Removal / Re-inclusion / Re-allocation / Switch of a cash penalty

Reference ID	T2S.22.440

The CSD shall be able to request the removal, re-inclusion, re-allocation, or switch of an existing cash penalty:

- From its computation and reporting,
- Until (and including) the twelfth business day of the calendar month following the month where the penalty was initially computed, which shall be considered as the end of the appeal processing period.

The exact timings in the operating day will be defined in the specification phase.

Note: The appeal processing period to request corrections or modifications of penalties shall end before the provision of the monthly aggregated amounts (see UR T2S.13.460) that the CSDs will use in their collection and redistribution of penalties.

Removal, re-inclusion, re-allocation and switch channel

Reference ID	T2S.22.450

The removal, re-inclusion, re-allocation or switch of cash penalties shall be available in U2A mode and A2A mode for the CSD.

Recalculation of cash penalties triggered by their re-inclusion, re-allocation or switch

Reference ID	T2S.22.460

T2S shall automatically re-calculate cash penalties that have been re-included, re-allocated or switched since the last recalculation process, i.e. those penalties flagged as 'to be recalculated after being modified'. Once the re-calculation has been performed, this flag shall be removed.

Note: The removal of a penalty shall not trigger any recalculation.

22.6 Automatic update of existing cash penalties by T2S

Update of reference data triggering a recalculation of existing cash penalties

Reference ID	T2S.22.470

T2S shall automatically re-calculate existing cash penalties affected by the below data updates occurred since the last recalculation process:

- Changes in the reference price of a given ISIN,
- Changes in the value of the attributes of the Securities Subject to Cash Penalties i.e. the ISIN, the value of the financial instrument type or the Liquidity,
- Changes in the value of the Daily flat penalty rate (either the securities penalty rate or the cash penalty rate) or in the list of SME Growth Markets necessary for identifying the applicable penalty rate.

T2S shall only recalculate cash penalties:

- From their initial computation and reporting, until (and including) the twelfth business day of the calendar month following the month where the penalty was computed, which shall be considered as the end of the appeal processing period.

T2S shall not recalculate cash penalties that have been removed by the CSD (i.e. penalties with status ''removed'', shall not be recalculated by T2S).

Cash penalty automatically updated by T2S

Reference ID	T2S.22.480

After recalculation, T2S shall reflect the update of the cash penalty with the following attributes:

- Reason code: 'updated';
- New updated amount and values.

Submitted annexes / related documents:

Change Requests in relation with the T2S Penalty Mechanism:

-CR 600 -T2S reporting functionality must be enhanced to allow the retrieval of the settlement instructions and their related SF1 (accepted) /SF2 (matched) timestamps via A2A/U2A in an efficient and standard way
https://www.ecb.europa.eu/paym/t2s/progress/pdf/crg/t2s_0600_sys.pdf

-CR609 -T2S must be able to report settlement status 'Failing' for settlement instructions for which settlement at the Intended Settlement Date (ISD) is no longer possible
https://www.ecb.europa.eu/paym/t2s/progress/pdf/crg/t2s_0609_sys.pdf

-CR 621 -Multiple pending reason codes (combination of lack of securities and lack of cash)
https://www.ecb.europa.eu/paym/t2s/progress/pdf/crg/t2s_0621_sys.pdf

-CR 640 -Bilaterally Agreed Treasury Management (BATM) operations to be applied on bilateral basis only
https://www.ecb.europa.eu/paym/t2s/progress/pdf/crg/t2s_0640_sys.pdf

-CR 713: Alignment of T2S Messages with ISO Standards Release 2018 – 2019 and migration to ISO registered versions:
https://www.ecb.europa.eu/paym/target/t2s/governance/pdf/crg/T2S-0713-SYS.pdf

-CR 715 - Optimisations to the T2S Penalty Mechanism's (CR654) user requirements
https://www.ecb.europa.eu/paym/target/t2s/governance/pdf/crg/T2S-0715-URD.pdf

Annexes:

- Presentation from the CSDR TF on the Activation of the T2S Penalty Mechanism:
Annex 1- CSDRTF_Activation of the T2S Penalty Mechanism" (Power point)

- Other Annexes with SDDs drafts:

Annex 2 - GFS (Word document)

Annex 3 - UHB (Word document)

Annex 4 - Customized semt.044 message documentation (pdf, xls, xsd)

Annex 5: Specifications for the flat files for reporting of penalties:

a. Daily penalty list flat file format specifications (Word document)
b. List of modified penalties flat file format specifications (Word document)
c. Monthly aggregated amounts flat file format specifications (Word document)

Annex 6: Documentation for bulk files specifications:

a. Securities subject to penalties bulk file format specifications (Word document)
b. Daily Price bulk file format specifications (Word document)
c. Penalty Modification requests bulk file format specifications (Word document)

Annex 7 - UDFS (Word document)

Annex 8 – UDFS Message Usage Examples (XML documents)

Proposed wording for the URD Change request:

T2S Penalty Mechanism URs shall be integrated as sub-sections in the T2S URD at the level of the following chapters:

Chapter 3 - Processing Schedule and Calendar

Chapter 13 - Messages and Reports requirements

Chapter 14 - Queries requirements

Chapter 16 - Static Data Requirements

Chapter 22 - New chapter describing the Computation and Maintenance of Cash Penalties

Glossary

GFS:
Sections affected are described in the "Impact on major documentation"
Proposed wording is provided in the **Annex 2**.

UHB:
Sections affected are described in the "Impact on major documentation"
Proposed wording is provided in the **Annex 3**.

Customized semt.044 message documentation:
It includes pdf, xls and xsd (plain and enriched) with T2S-Use and T2S-Mapping
Proposed wording is provided in the **Annex 4**

Specifications for the flat files for reporting of penalties:

Proposed wording is provided in the **Annex 5**, as follows**:**

a. Daily penalty list flat file format specifications
b. List of modified penalties flat file format specifications
c. Monthly aggregated amounts flat file format specifications

Bulk file format specifications:

Proposed wording is provided in the **Annex 6**, as follows**:**

a. Securities subject to penalties bulk file format specifications
b. Daily prices bulk file format specifications
c. Penalty Modification requests bulk file format specifications

UDFS:

Sections affected are described in the “Impact on major documentation”

Proposed wording is provided in the **Annex 7**.

UDFS Message Usage Examples:

Proposed wording is provided in the **Annex 8**.

High level description of Impact:

Outcome/Decisions:

* CRG teleconference on 18 May 2017: The CRG put the Change Request on hold.

* CRG meeting on 07 June 2017: The CRG was of the opinion that the Change Request should be classified as ‘evolution/enhancement due to regulation’. The CRG agreed to keep the Change Request on hold.

* CRG meeting on 04 July 2017: The CRG did not raise any objection on the updated Change Request following a comment during the CSDR TF written procedure until 23 June 2017 and asked the 4CB to continue the detailed assessment based on the updated Change Request

* OMG on 17 July 2017: During a written procedure from 6 July - 13 July 2017, the Operations Managers Group did not identify any blocking operational impact of the Change Request for now.

* Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) on 29 June 2017: Following a written procedure from 23 to 29 June 2017, the AMI-SeCo was in favour of launching the detailed assessment on the Change Request.

* CSD Steering Group on 30 June 2017: Following a written procedure from 23 to 30 June 2017, the CSG was in favour of launching the detailed assessment on the Change Request.

* CRG meeting on 15 December 2017: The CRG agreed to put the Change Request on hold.

* CRG on the 26 September 2018: The CRG agreed to recommend to the Steering level to authorise the CR in its current version subject to a future Written Procedure.

* CRG on 4 October 2018: The CRG agreed to recommend to the Steering level to authorise the updated CR

* AMI-SeCo on 9 October 2018: The AMI-SeCo agreed to the recommendations from the CRG to confirm the authorisation of CR T2S-0654-URD following the updates to its requirements and the revision of its target deployment date

* CSG meeting on 10 October 2018: The CSG has confirmed authorisation for ranking and allocation to a release on this updated Change Request.

* RMSG on 17 October 2018: The RMSG agreed to launch the detailed reassessment of this CR in view of T2S R4.2

* NECSG on 19 October 2018: The NECSG adopts the resolution to confirm the authorisation of the updated Change Request.

* MIB on 25 October 2018: The MIB agreed to authorise the updated CR-654.

* CRG on 23 January 2019: The CRG recommended to PMG the inclusion of CR-654 in R4.2.

* PMG on 24 January 2019: The PMG agreed to the proposal to allocate CR-654 to R 4.2.

* OMG on 1 February 2019: OMG identified an operational impact.

* CSG on 6 February 2019: The CSG approved the inclusion of CR-654 in R4.2.

* NECSG on 8 February 2019: The NECSG approved the inclusion of CR-654 in R4.2.

* CRG on 4 July 2019: CRG members approved changes to CR-654 to integrate the requirements of CR-715 and took note of the newly described Billing data collection process. In addition, CRG members took note of the update or addition to CR-654 of multiple annexes detailing the specifications of messages and files to be sent to/received from T2S for the management of penalties, as well as documentary impacts.

* CRG on 30 March 2020: The CRG agreed to the updated documentation of CR-654.

* CSG on 3 April 2020: The CSG approved the updated CR-654 documentation.

* NECSG on 3 April 2020: The NECSG approved the updated CR-654 documentation.

* CRG on 15 May 2020: The CRG agreed to the documentation updates of CR-654.

* CRG on 26 May 2020: The CRG took note of minor, additional adjustments to CR-654. The CRG confirmed its earlier recommendation to the PMG to implement CR-654 in T2S R4.2.

* CRG on 2 July 2020: The CRG agreed to the documentation updates of CR-654.

Detailed assessment:

EUROSYSTEM ANALYSIS – GENERAL INFORMATION

Impact On T2S	**Static data management**		**Interface**	
		Party data management		Communication
	X	Securities data management	X	Outbound processing
		T2S Dedicated Cash account data management	X	Inbound processing
		Securities account data management		
	X	Rules and parameters data management		
	Settlement		**Liquidity management**	
	X	Standardisation and preparation to settlement		Outbound Information Management
		Night-time Settlement		NCB Business Procedures
		Daytime Recycling and optimisation		Liquidity Operations
		Daytime Validation, provisioning & booking	**LCMM**	
		Auto-collateralisation		Instructions validation
				Status management
	Operational services			Instruction matching
		Data Migration		Instructions maintenance
	X	Scheduling	X	Penalty mechanism
	X	Billing	**Statistics, queries reports and archive**	
		Operational monitoring	X	Report management
			X	Query management
			X	Statistical information
			X	Legal archiving
		All modules (Infrastructure request)		
		No modules (infrastructure request)		
		Business operational activities		
		Technical operational activities		

Impact on major documentation		
Document	**Chapter**	**Change**
Impacted GFS chapter	2.2 Overall high level diagram	Include Penalty Mechanism in the diagram
	2.3.3 Lifecycle Management and Matching	Include references and general description of the new module “Penalty Mechanism”.
	3.2.4.3 3 – Check for U2A Availability	Introduce changes due to new queries
	3.2.4.4- Description of the Input/Output of the module 3.2.5.4 Description of the Input/Output of the module	Add new flow information from LCMM to the table
	3.3.8.3 Description of the entities	Add new message flow to the table
	3.4 Lifecycle Management and Matching 3.4.1 General Introduction	Include descriptions for new entities foreseen in the Static Data conceptual data model.
	3.4.2 Dynamic data managed by the domain	Include references and general description of the new module “Penalty Mechanism” and update LCMM general diagram.
	3.4.6 Status Management	Include descriptions for new entities foreseen in the LCMM conceptual data model.
	New section 3.4.7 Penalty Mechanism	Include reference to the preparation for the Penalty Eligibility after an instruction is identified as failing.

	3.7.4.2 Static Functional Description	Include the description of the new module, illustrative diagram and its different functions
	4.1.5 QU: Queries	Add the references to the T2S Penalty Mechanism reporting functionality. Update the Diagram.
	4.1.6 RE: Reports	Add queries related to the T2S Penalty Mechanism Add reports related to the T2S Penalty Mechanism
Impacted UDFS chapter	New section 1.1.1.5 Penalty Mechanism	New UDFS chapter describing the new functionality. The description shall include the life cycle of a penalty and the possible status transitions
	New section 1.2.7 “Static data for penalties”	New UDFS chapter detailing the data to be set up for the penalty computation, as well as the allowed Financial Instrument Type/Liquidity/SME Growth Market/Asset type combinations and the CFI code-Financial Instrument type correspondences.
	Section 1.4 “Settlement day”	Add processes for the Penalty Mechanism
	Section 1.5.1 “Business application configuration”	List the T2SO responsibilities in setting up penalty data.
	New section 1.6.1.14 Penalty Mechanism	New UDFS chapter to describe in detail the structure and functional aspects of the T2S Penalty Mechanism.
	Section 1.6.3.3.1 “Static data objects”	Include new SD objects in the table.
	Section 1.6.3.3.2 “Static data maintenance types”	Include new SD objects mode with the related maintenance types in the table.
	Section 1.6.3.3.3 “Validity of static data objects”	Include new SD objects in the respective tables.
	Section 1.6.3.3.4 “Static data archiving and purging”	Include new SD objects in the table.
	Section 1.6.3.3.6 “Static data maintenance instruction processing”	Include new SD objects in table 167 – “Static data objects that can be maintained while a night-time sequence is running”.
	1.6.4.1.3 Status Management	Add new references to describe the relationship between instructions identified as failing and the T2S Penalty Mechanism.
	1.6.4.2.3 Report generation	Add the new references to the T2S Penalty Mechanism reporting functionality.
	1.6.4.4.3 Query Management process	Include new queries in the table.
	1.6.5.7.6 Billing Data collection process	Inclusion of new Service Items in table 195 and 197 and additional information to service items in table 191
	2.19.3 Outbound messages	Include new message in the table.
	2.20.2.1 Business Event	Add footnotes to mention the Monthly Aggregated Amounts.
	New section 2.28 “Bulk load securities subject to penalties”	New section describing the interaction from a user perspective for loading Securities subject to

		penalties.
	New section 2.29 “Bulk load daily prices for penalties”	New section describing the interaction from a user perspective for loading Daily prices.
	New section 2.30 Send penalty modification requests	Include new chapter to describe how to request A2A the modification of penalties (bulk load of penalty modification request through flat file).
	3.2.2.3 “Outbound Traffic exceeding given size limitations”	Include semt.044 and tags for pagination
	3.3. List of Messages / New section 3.3.7 Securities Management (semt)	New section for the new message of the T2S Penalty Lists (semt.044). The new message has 3 usages and a total of 7 examples
	4.1. Index of Business Rules and Error Codes	New business rules that apply in the processing of A2A modification requests. New business rules from new SDMG functions.
	4.2. Index of Status Values and Codes	New Status Values and Codes for the new LCMM functions
	New section 4.7. Securities subject to penalties bulk file format specifications	New section describing the flat file format specifications for Securities subject to penalties
	New section 4.8. Daily prices bulk file format specifications	New section describing the flat file format specifications for Daily prices
	New section 4.9. Penalty Modification requests bulk file format specifications	New section describing the flat file format specifications for Penalty Modification requests
	New section 4.10. Specifications for the flat file for reporting of penalties	New section for the flat file reporting the T2S Penalty Lists. It is not merged with the other flat files because it is not sent at EoD.
Additional deliveries for Message Specification	Customized new message pillar 3, define the T2S-Use and T2S-Mapping	Develop the new message (modelling and definition), customisation (prune un-used fields) define the T2S-Use and T2S-Mapping,
	UDFS examples for the three usages of the new message	Upload in MyStandards with creation of a total of 7 examples for UDFS.
	Register the new message.	Register (in a second step e.g. in 2021) the message.
	admi.005	Update of the datatype ReportCode_T2S_1 with codes for the new Reports
	camt.077 code list	Update of the camt.077 code list for Service Items
UHB	2.2.2.18 Settlement Instruction – Details Screen	Update the screen definition to add the option to search for the associated penalties of the settlement instruction.
	2.2.2.22 Penalty – Search/List Screen	Add a new UHB section for the search and retrieval of penalties.
	2.2.2.23 Penalty – Details Screen	Add a UHB section for checking the details of a given penalty.
	2.2.2.24 Monthly Aggregated Net Amounts – Search/List Screen	Add a new UHB section for the search and retrieval of monthly aggregated net amounts.
	2.2.2.25 Penalty Removal Screen	Add a new UHB section for the Penalty Removal

	2.2.2.26 Penalty Re-allocation Screen	Add a new UHB section for the Penalty Re-allocation
	2.2.2.27 Penalty Switch Screen	Add a new UHB section for the Penalty Switch
	2.4.1.1 Available Reports - Search/List screen	Add Daily Penalty List, the List of Modified Penalties and the Monthly Aggregated Amounts to the list of Report Types
	2.4.1.22 Available Report - Daily Penalty List 2.4.1.23 Available Report - List of modified Penalties 2.4.1.24 Available Report - Monthly Aggregated Amounts	Add new sections for the details of the available report: Daily Penalty List, List of Modified Penalties and Monthly Aggregated Penalties
	2.5.11.1 Revisions/Audit Trail - List Screen	Add Cash Penalty Audit Trail List Query to the list of needed privileges
	3.15.7 Monitoring of Penalties	Add a new business package to describe the monitoring of penalties computed by T2S for failing settlement instructions.
	Section 6.3.2 List of privileges	Include new privileges related to new GUI screens.
	Section 6.4 List of references for error messages	Include new business rules related to new GUI screens. New UHB sections for new SDMG screens.
	2.5.12 New sections for Penalty Reference data: 2.5.12.1Securities subject to cash penalties – Search/List 2.5.12.2Securities subject to cash penalties – New/Edit 2.5.12.3Security penalty rate – Search/List Security penalty rate – New/Edit (T2SO only) 2.5.12.4 Cash discount penalty rate – Search/List Cash discount penalty rate – New/Edit (T2SO only) 2.5.12.5 Euro foreign exchange rate – Search/List 2.5.12.6 Euro foreign exchange rate – New/Edit screens 2.5.12.7Daily price – Search/List 2.5.12.8Daily price – New/Edit SME Growth Market – New/Edit (T2SO only) 2.5.12.9 SME Growth Market – Search/List	

Links with other requests				
Links	Reference		Title	

OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT

Summary of functional, development, infrastructure and migration impacts

LCMM

A complete new component, i.e. The Penalty Mechanism, will be created at LCMM level. It will manage the computation, recalculation, maintenance and reporting of penalties. It will constitute a new module of the LCMM domain and its structure can be divided in the following functions:

- SEFP eligibility: The function aims to analyse whether a Settlement Instruction is eligible to be imposed with a penalty (SEFP). For the initial identification of the instructions to be analysed for SEFPs, the function relies on the implementation of CR-0609 for which an instruction is identified as failing.
- LMFP eligibility: The function aims to analyse whether a Settlement Instruction is eligible to be imposed with a penalty (LMFP).
- Computation: This function calculates the amount of each penalty based on the relevant reference data and details of the instruction for which the penalty is computed.
- Maintenance: The function processes penalty modification requests to remove, re-include, re-allocate or switch a penalty.
- Recalculation: This function is responsible for the recalculation and consequent update of existing penalties. The recalculation of a penalty is triggered when its related reference data changes, or when a re-inclusion, re-allocation or switch of a penalty takes place.
- Calculation of daily and monthly aggregated amounts: This function is responsible for calculation of bilateral net amounts (monthly or daily).
- Reporting: The function is responsible for the reporting of penalties. It includes the following three reports:
    - Daily Penalty List,
    - List of Modified Penalties, and
    - Monthly Aggregated Amounts (or Monthly bilateral net amounts).

  For this reporting, a new pillar III ISO-20022 message -semt.044- will be developed by the 4CB (each of the above reports will be a message usage i.e. three message usages for T2S).

  CSDs will be able to receive the penalty reporting as flat file format or in semt.044 format (whereas Directly connected CSD participants can only use semt.044 format).

  For the flat file format, in order to align it as much as possible with the xml, as well as to maximize efficiency and readability, 3 flat files will be defined (one for each message usage). Each message usage defines data to be informed (or not) as follows:
    - The Daily Penalty List provides all data,
    - The List of Modified Penalties does not provide the details of the underlying instruction, and
    - The Monthly Aggregated Amounts (or Monthly bilateral net amounts) does not provide neither the details of the underlying instruction nor the calculation details of the penalty

  Hence, for efficiency, readability, performance and equivalency with xml, 3 flat files will be developed instead of a single flat file (i.e.: the tags not fulfilled are translated in empty spaces, therefore with 1 single flat file we already know there will be empty blocks translated in numerous and unnecessary empty spaces).

New screens for the Penalty Mechanism will be created for querying penalties and their details as well as the Monthly Aggregated Amounts.

Also in line with the requirements, the modification of a penalty can be requested by CSDs via U2A and also via flat file (through a flat file interface for bulk loading of penalty modification requests for LCMM).
For the flat file, an “enriched flat file” including the responses for each penalty modification request will be provided, informing whether the requested modification has been rejected or executed.
Note: In line with the T2S.22.460 (“T2S shall automatically recalculate cash penalties that have been re-included, re-allocated or switched since the last recalculation process”), it is important to mention that the “enriched flat file” does not contain any information about this recalculation because it will be performed in the daily recalculation process.

One privilege will be defined for requesting a modification of a penalty. However, there is neither data scope extension nor reduction for penalties.
Consequently, the privilege foreseen for modifying a penalty will be a System privilege. The required check on the failing penalty being in data scope of the CSD associated to the user sending the request will be performed by LCMM.

SDMG

The reference data for penalties will be stored in a number of new Static Data objects:

- Securities subject to cash penalties (maintained by SME CSDs)
- Security penalty rate (maintained by the T2SO)
- Cash discount penalty rate (maintained by the T2SO)

- Euro Foreign exchange rate (maintained by the ECB)
- Daily price (maintained by SME CSDs)
- SME Growth Market (maintained by the T2SO)

All the above objects will have creation, update, deletion, restore and query functions in U2A mode.
Securities subject to cash penalties and Daily price will also have creation and update functions through a flat file interface for bulk loading.

New privileges and access rights logic will be put in place to handle the new objects.

None of the foreseen SD changes on new objects will be queued during night-time settlement.

Reporting will be configured through the existing Report Configuration functionality, which will be adapted for the new report types. A new Event Type category will be defined for events to be used for penalty reports.

New attribute domain to store the number of business day in the month has to be defined.
A new software component will be specified. This component will take care of updating the related attribute domain on a daily basis.

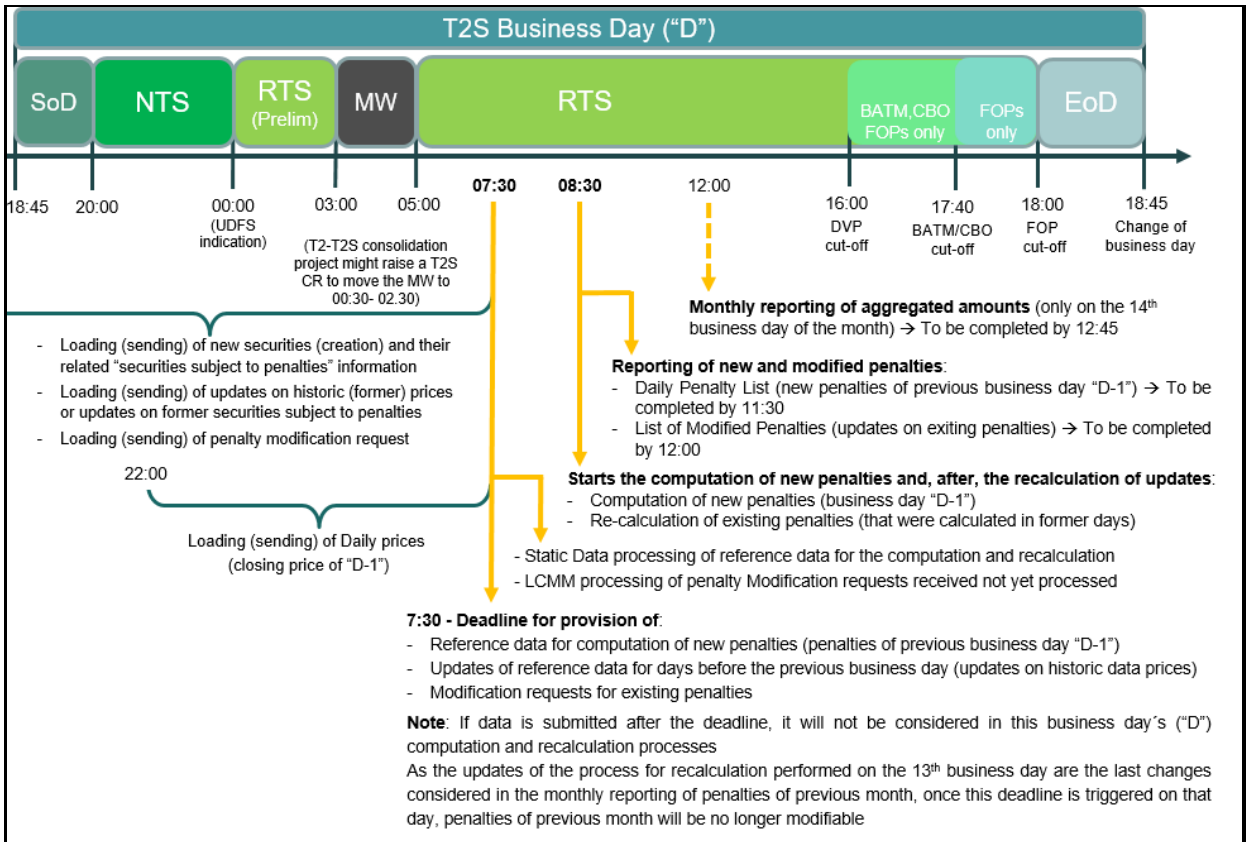
New attribute domain to store the possible asset types and the related combinations of Financial instrument type, liquid/illiquid attribute, SME Growth market will be developed (based on table 16-9-5 in T2S.16.1020).

Schedule of activities and volumes

The timings proposed have been defined according to the following principles:

- 4CB have considered in this assessment the leanest approach i.e. the most suitable times and preferred windows according to the data distribution and existing volumetric assumptions.
- This assessment proposed an schedule in line with the CSDR TF agreement, and the different activities are placed taking into account the feedback received: i) CSDs cannot provide the daily prices before 22:00, and 7:30 should be the new deadline by when they shall be loaded in T2S, and ii) reporting of new and modified penalties should be finished by 12:00,
- The 4CB assessment is based on the current daily T2S Maintenance Window (MW) between 3:00 am and 5:00 am. Nevertheless, time windows proposed take into account a possible post T2/T2S consolidation where URs foresees a Maintenance Window (MW) re-scheduled to 00:30- 2:30am. In any case, in order to achieve an optimal usage of resources, the final schedule of the MW after the T2/T2S consolidation might need to keep a similar timing than the current T2S daily Maintenance Window and will have to be analysed in the context of the related T2S CR.

T2S shall perform the activities in the proposed schedule as long as the volumes described for each activity are respected. The working assumptions (volume and timings) for the different activities and main processes are listed hereafter:



Note: According to UR T2S.14.980, it won´t be possible for the users to query penalties (U2A), neither during the Maintenance Window (MW), *nor during the computation and recalculation processes (indicative timing for the computation and recalculation processes is 8:30 to 11:00). Also during these periods, A2A penalty modification requests received will be queued (not processed)*

Detailed description of the activities and processes triggered daily:

- **Daily loading (sending) of new securities and their related securities subject to penalties information** (activity performed by the T2S Actor- loading of Reference Data)
  - Volume:
    It is assumed that the volumes to be received shall be equal to number of new securities issued/loaded per day (and with country of issuance an EU country): 15,000
    Peaks observed during the last 12 months are around 30,000.
  - Timings:
    It is assumed that it will be done same time as the loading of new ISIN.
    They can be provided at different timing than the creation of the ISIN, nevertheless, in order to be considered in the next computation/recalculation process they have to be provided before 7:30

- **Daily loading (sending) of prices for penalties** (activity performed by the T2S Actor- loading of Reference Data)
  - Volume:
    It is assumed that the volumes to be received shall be equal to the number of active securities with country of issuance an EU country: 2,200,000
  - Timings:
    Given that the prices are the closing trading price of the security CSDR TF feedback was that they will be provided after 22:00, but **main volume is expected between 6 and 7am.**
    In order to be considered in the next computation process they have to be provided before 7:30

- **Loading (sending) of updates on historic (former) prices or updates on Securities subject to penalties** (activity performed by the T2S Actor- loading of Reference Data)
  - Volume:
    This activity shall only occur if there were either missing or incorrect reference data of former business days, which needs to be provided to T2S. It is assumed that this will only occur if there are penalties computed using the missing or incorrect reference data, consequently the volumes to be received shall be a daily maximum of 15,000 (equivalent to correct all the new issued ISINs)
    Exceptional peak (not consider for normal business day schedule): half of the volume of a daily

loading of process. This is assumed to be due of an issue on the sending of the prices (e.g. a major data provider cannot provide the prices on one day). In such a case it is expected that prices will be available long before 7:30 am and they should be handled by an operational procedure along the day to avoid a performance issue at 7:30 am.

- Timings:
  They can be provided at different timing than the provision of the prices, nevertheless, in order to be considered in the next recalculation process they have to be provided before 7:30 am.

- **Loading (sending) of penalty modification requests** (activity performed by the T2S Actor- loading of Dynamic Data).
  - Volume:
    This activity shall only occur if ex-post corrections on already calculated penalties are needed. It is assumed that the volumes to be received shall be a maximum daily average of 10% of the penalties (below), i.e. 9,000.
    U2A requests are executed as soon as the request is sent in the screen, which has to be done penalty by penalty.
    A2A allows several modification requests in a bulk file. The files will be processed as soon as it is received except for queued files during the MW and 7:30-12:00 am. Consequently, volumes are only relevant for this activity in case they will be received short before the deadline (7:30 am) as they have to be processed before the recalculation.
    Exceptional peak: same volume of penalties computed on a given day (see computation process below). I.e. 80,000. In case of the exceptional peak, it is assumed that they would not be provided right before the deadline (7:30 am) but with enough time to process them (e.g. before the MW).
  - Timings:
    They can be provided at different timing along the day, nevertheless, in order to be considered in the next recalculation process they have to be provided before 7:30 am.
    T2S shall finish the processing (execution) of the received request for modifying penalties will have to be finished by 8:30 am.

7:30- Deadline for provision of data in order to consider it in the next computation/recalculation of penalties.
I.e. if any of the Reference data or Dynamic data previously described is provided after this deadline, it will not be considered in the next computation/recalculation process and will have to wait until the following one (the business day after).

- **Static Data processing of reference data** (T2S activity): Processing for extracting and preparing the reference data (received before deadline) for the computation and recalculation process. I.e. Creation of the new "Penalty reference data for securities".
  - Volume: 2,200,000
  - Timing: starts at 7:30 (with deadline) and shall be finished by 8:30.
  - Dependency: It has to be finished in order to start the Computation of new penalties

- **Computation of new penalties (T2S activity)**
  - Volume: 90,000
    It is assumed that the volumes affected in the computation shall be the number of failed pairs of matched settlement instructions (60,000) adjusted as follows:
    - Increased 0.2 times for the settlement instructions sent late to T2S i.e. instructions (all: already matched and unmatched) sent with ISD before the business day when the instruction is accepted in T2S - (subject to analysis for LMFPs).
    - Increased 0.1 times for the settlement instructions that failed on both sides (e.g. both legs are on hold or both legs have links).
    - Increased 0.2 times of buffer.
  - Timing:
    Starts at 8:30 as long as Static data processing of reference data has finished (see dependency mentioned above)
    The end time expected is not provided for this process but in the last scheduled process (i.e. the Reporting of new penalties) where the deadline exists.
  - Dependency:
    It has to be finished in order to start the Reporting of new penalties as well as the Recalculation

- **Reporting of new penalties (T2S activity)**: Daily Penalty List
  - Volume: 225,000
    It is assumed that the number of penalties reported shall be equal to 2,6 times the number of items computed. The resulting figure was adjusted (slightly reduced) by instructions with ISO transaction code different from CORP (that trigger the computation but no penalty is reported as they are out of scope.

It is 2,6 because:
- each penalty is reported to the failing and the non-failing party (i.e. 2 times)
- 0,6 times because the DCPs receive the reporting on top of the CSDs. We assumed that 30% of volumes of settlement relate to DCPs.

It is assumed that approximately 35% is reported using a flat file format (80,000) whereas the other 65% is reported using the semt.044 (145,000)

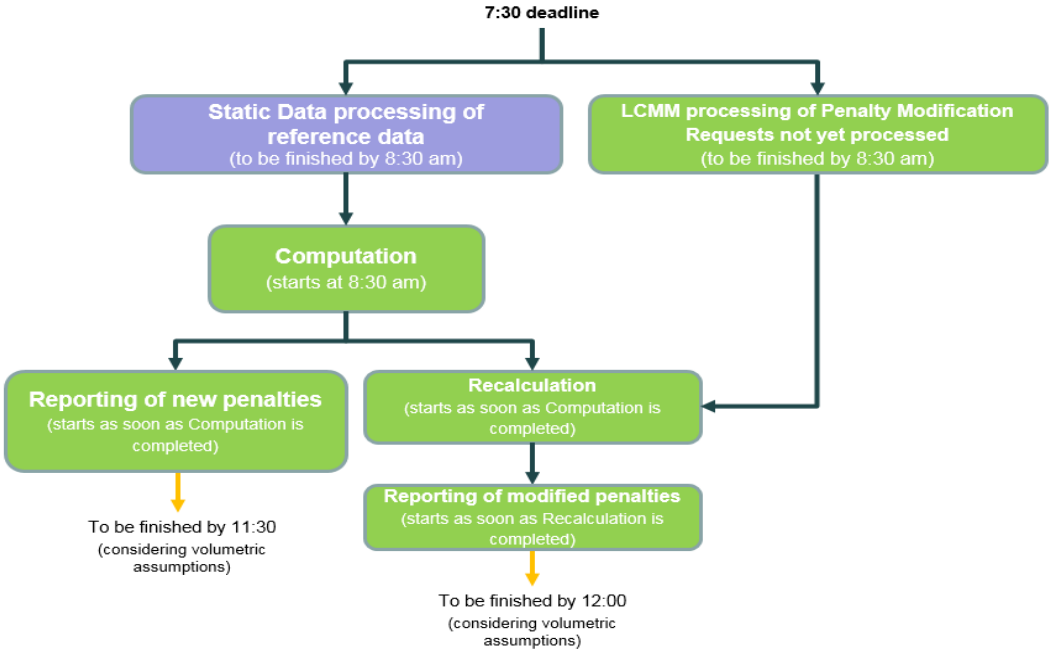
- Timing:
  Starts as soon as the Computation process has been performed.

Note: The above numbers for reporting of new penalties assumed that penalties with "Not computed" status would be reported. However, after CR-715 they are recorded but not reported.
Not reporting penalties with "Not computed" status reduces the above number assumed to be reported. Consequently, this change has a positive effect on performance. The effect may be relevant or not depending on the number of penalties with "Not computed" status. Given that there is no estimation on the number of penalties with "Not computed" status, the positive effect cannot be measured and will only be considered as a better situation for ensuring compliance with reporting end times proposed.

- **Recalculation of penalties** (T2S activity)
  - Volume: 9,000
    It is assumed an average equal to 10% of volume of a daily computation
    Exceptional peak (not consider for normal business day schedule): same as volume of a daily computation
  - Timing:
    Starts as soon as the Computation process has been performed.
    The end time expected is not provided for this process but in the last scheduled process (i.e. the Reporting of modified penalties) where the deadline exists.
  - Dependency: It has to be finished in order to start the Reporting of modified penalties

- **Reporting of modified penalties** (T2S activity)- List of Modified Penalties
  - Volume: 22,500
    It is assumed that the volumes reported are 2.6 times volume of Recalculation. It is assumed that the number of penalties reported shall be equal to 2,6 times the number of items recalculated because:
    - each penalty recalculated is reported to the failing and the non-failing party (i.e. 2 times)
    - 0,6 times because the DCPs receive the reporting on top of the CSDs. We assumed that 30% of volumes of settlement relate to DCPs.

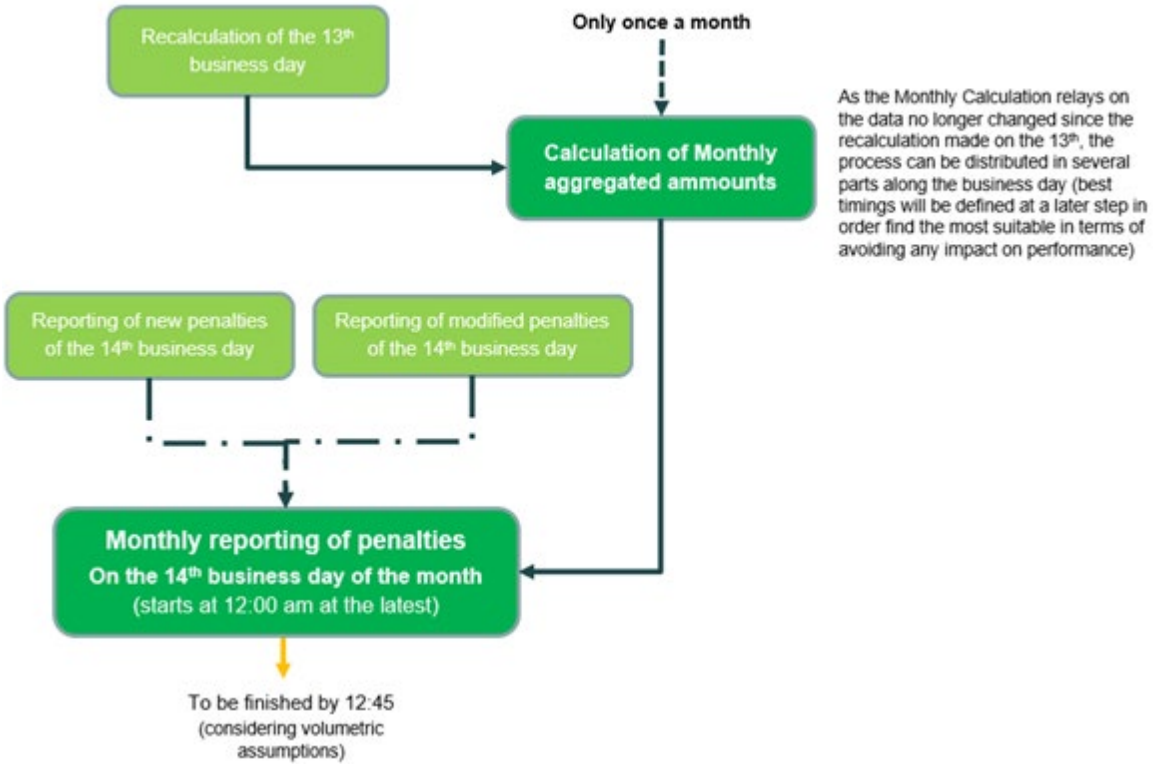
    It is assumed that approximately 35% is reported using a flat file format (8,000) whereas the other 65% is reported using the semt.044 (14,500)
  - Timing:
    Starts as soon as the Recalculation process has been performed.
    It has to be finished by 12:00



Detailed description of the processes triggered only once a month:

- **Calculation of monthly aggregated amounts** (T2S Activity): This activity ensures that the monthly reporting is complete from the calculation performed on a daily basis.
  - Volume: 250,000
    It is assumed that the number of bilateral net amounts is 50 times the number of parties (CSD Participants) in the system
  - Timing:
    As it relays on the data no longer changed since the recalculation made on the 12th, the process can be distributed in several parts.
    The end time expected is not provided for this process but in the last scheduled process (i.e. the Monthly Reporting of penalties) where the deadline exists.

- **Monthly reporting of penalties** (T2S activity) - Monthly Aggregated Amounts
  - Volume: 4,500,000
    It is assumed that the volumes reported are 20 times the reporting of new penalties (i.e. it is 20 business days in a month)
    Note: For each item (penalty) reported less information is provided (i.e. calculation details of the penalty are not provided in the monthly)
    It is assumed that approximately 35% is reported using a flat file format (2,900,000) whereas the other 65% is reported using the semt.044 (1,600,000)
  - Timing:
    Starts at 12:00 at the latest, but in case the daily reporting (reporting of new penalties and reporting of modified penalties) has finished before it will start as soon as the daily reporting has been performed.
    It shall be finished by 12:45 of the 14th business day of the month.
    Note: In case there are time constrains to reach the deadline, it can be foreseen to start already before the MW.



Settlement Day changes

The previously described new activities and processes that are needed for the Penalty Mechanism require new business and technical events to trigger them.

- Event to trigger (at 7:30) the deadline for provision of the needed Static Data and modification requests (in order to be considered in the next computation and recalculation).
- Events to trigger the LCMM computation and recalculation processes, as well as the reporting of new penalties or modified penalties

- Events to trigger the calculation of monthly aggregated amounts and their reporting.
- Also the periods when queries are not available or where penalty modification requests will be queued, will be based on (triggered by) events that have to be added to the operating day.

QUM:
The new Cash Penalty Mechanism requires several new queries described hereafter:

- Cash Penalty List Query: This query is used by CSD users to receive a list of debited and/or credited cash penalties for Settlement Instructions under their responsibility. In order to facilitate the usage, several blocks with search criteria are present which can be used independently or together. Nevertheless, certain search criteria are mandatory. The search is possible by Reference (of the instruction or of the penalty), by ISIN or by T2S Party. Also a system-entity wide query is possible. The query response will be displayed as list showing the main data of several cash penalties in case the query returns more than one penalty. In case only one penalty is contained in the query result set, the Penalty Details Screen is shown directly which contains all details of the respective penalty.
- Cash Penalty Details Query: In case the Cash Penalty List Query returns a list of penalties, the user can choose one entry of the list and push the Details button which will then show all details of the selected penalty in a new screen (Penalty Details Screen).
- Monthly Net Penalty Amounts Query: This query shows the monthly aggregated amounts of cash penalties for the party of the querying CSD user. The query is only possible for the past 3 calendar months excluding the current one.

All privileges foreseen for the above queries are considered as System privileges. Therefore, no data scope extension nor reduction is possible for these queries.

Additionally, the Cash Penalty Mechanism needs several new Static Data Objects which are required for the calculation. In order to view and maintain these static data objects, several new queries are necessary:

- Securities Subject To Cash Penalties Query: This query returns the list of securities which are set as being subject to cash penalties. This list is maintained by the SME (securities maintaining entity) so this query is only accessible by CSDs for the securities maintained by them.
- Daily Prices Query: This query returns a list of prices to be used for the daily calculation of cash penalties. It is maintained by the SME, so this query is only accessible by CSDs for the securities maintained by them
- Cash Discount Penalty Rate Query: This query provides a list of applicable rates for each currency. The list is maintained by the T2S Operator but can be queried by every T2S user having the respective system privilege assigned.
- Euro Foreign Exchange Reference Rate Query: This query returns the list of official rates for each currency against the Euro. The list is maintained by the ECB but can be queried by every T2S user having the respective system privilege assigned.
- Security Penalty Rate Query: The security penalty rate is a list of applicable rates for each security's asset type. The list is maintained by the T2S Operator but can be queried by every T2S user having the respective system privilege assigned.

REM:

- REM to format and store the A2A reports: After their generation, REM is formatting and storing the reports in the same data base as any other A2A report (although they have been generated by LCMM). This implies the pull in A2A or query in U2A, uses the same interfaces as any existing report towards REM (i.e. QUM will not need to send a flow / access the back end module-LCMM).

INTF
Amendment of flow between INTF and LCMM for incoming instructions.
Add the handling of U2A Cash Penalty Queries during the maintenance window and during the computation and recalculation processes where they shall not be allowed.
Introduce the new semt.044 and there usages to the outbound processing.
Introduce pagination for semt.044 in case one page is bigger than 32MB.
MSG:
Update of the datatype ReportCode_T2S_1 in the admi.005 to add new codes for the three new Report types.
Update of the camt.077 code list for Service Items.

Billing
Definition and implementation of new Service items for Queries and reports

LTSI/LEA
LTSI will store the information on cash penalties provided by LCMM module and the new static data objects:

- data extraction (new LCMM files, new SD objects)
- define/ update loading rules for DWH
- Update the DWH data model with the Cash penalties data.

This information will be available for reporting purposes through the free queries service.

LEA will archive the message semt.044 and flat files for legal and regulatory purposes.

Migration (activation) for the T2S Penalty Mechanism

Penalties cannot be computed before the deployment date because T2S would not have the related features implemented. Hence, the deployment date and the activation date of the Mechanism are strictly linked.

The CSDR TF agreed that penalties should be computed considering the fails that occur on or after the activation date of the T2S Penalty Mechanism. Consequently:

- T2S will compute SEFPs for instructions that fail to settle in T2S on and after the activation date.
- T2S will compute LMFPs for instructions matched in T2S on and after the activation date.
  When computing an LMFP (i.e. because the instruction was matched on and after the activation date), in the specific case where the ISD of the instruction is prior to the activation date, T2S will not consider the business days prior to the activation date because the security will not be subject to penalties before the activation date (in line with T2S.22.200, T2S will compute the LMFP based on applicable business days for which the security is subject to penalties). This will be achieved by setting the appropriate validity periods of the reference data (i.e. of the securities subject to penalties).

For further information on the Activation of the T2S Penalty Mechanism, please refer to the presentation submitted as annex to the CR:

"20190115_CSDRTF_Activation of the T2S Penalty Mechanism_CR654 Annex"

Main cost drivers: Creation of a new T2S component/module with a new communication channel with Middleware, new Interfaces with A2A and U2A, new data base for penalties and related Settlement Day impacts comprising:

- Definition and development of process for Penalty Eligibility & Computation. Execution of wide variety of test cases to check that the behaviour of the calculation process for LMFP & SEFP is aligned with the requirements for the different types of Instructions (DVP, FOP, PFOD, DWP) under various conditions (e.g. different place of trade). Comprehensive matrix of different failing reason codes and combination of statuses will be tested to see that the penalty is correctly calculated and addressed.
- Definition and development of functionality for daily reporting of new penalties via ISO message and Flat Files. Perform tests to check the A2A daily generated reports (ISO and Flat Files considering the different usages) to ensure that the penalties and their amounts are correctly calculated and reported. Perform testing of the report in ISO format, both in push and pull modes.
- Definition and development of Penalties related Screens, new ISO message and usages, as well as the inbound flat file. 4CB will draft and execute specific test-cases in business context on the various screens, message and usages, as well as the inbound flat files for penalty modifications to check that they are correctly defined.
- Definition and development of process for Maintenance (removal/re-inclusion/reallocation and switch) and Audit Trail Functionality. 4CB have to ensure in testing that the functionality allows to perform manual updates i.e. removal, re-inclusion, re-allocation and switch of penalties during the appeal period. Moreover, Audit Trails specific Test-Cases are to be conducted.
- Definition and development of functionality for Penalties Recalculation (in appeal period) and audit trail: 4CB have to check in testing that, whenever a relevant update in Static Data is performed, it is correctly transmitted and penalties are recalculated if they are in its appeal period. Also the reporting of recalculated penalties will be tested in this work-stream.
- Definition and development of process for the monthly aggregated amounts reporting. 4CBwill perform tests to check that the reporting of the calculation shown in the monthly report is consistent with the bilateral netting of all the penalties reported along the month for each counterparty. This test should be done when updates have occurred as well as when no update has been performed in the reported penalties.
- Definition and development of process for the handling of reference data for penalties, creation of new static data objects, new privileges and access rights logic and new attribute domains/software component.
- Definition and development of several new queries (Cash Penalty List Query, Cash Penalty Details Query, Monthly Net Penalty Amounts Query). The correct functioning of the queries and the newly implemented Revisions/Audit Trail and Data Changes screens have to be tested.
- Changes to the Settlement Day and execution of specific tests regarding cut-off management for ensuring a penalty is computed or not when the instruction is changed close to a cut-off.
- Execution of performance tests by 4CB: The large volume of items expected in the computation and reporting of penalties in production makes necessary a specific test to evaluate the performance related to the new functionality. In this line, NFTs will ensure the reliability of T2S and check the available resources in the system, consumption and impact in other process as well as compliance with the expected timings for completion. After the test campaign, an automatic set of test cases needs to be configured for future regression test campaigns.

Performance considerations: The potential CSG CR for two additional partial settlement windows (one 0.00 - 0.30 am CET and a second one 6.00 - 6.30 am CET) could have impact on the resource consumption/performance during the foreseen time slots for the delivery of the reference data by the customers and the processing of data/calculation of penalties. The impact will be evaluated once CR-0654 and the potential CR for the two additional PSW are implemented. It might become necessary to move the PSW foreseen from 6.00 - 6.30 to 5.45 -6.15 and the time window foreseen to receive main volumes of price data from 6.00 – 7.00 hrs am CET to 6.15 – 7.15 am CET and/or to purchase additional processing capacity.
Summary of project risk
Please refer to Issue ID#24 Non-compliance gap with the CSDR regulation due to late provision of final requirements by the Regulator
Security analysis
No adverse effect has been identified during security assessment.

21 December 2018

Cost assessment on Change Requests

T2S-654-SYS – T2S Penalty Mechanism			
One-off	Assessment costs* - Preliminary - Detailed	 2,000.00 20,000.00	 Euro Euro
One-off	Development costs	4,125,124.09	Euro
Annual	Operational costs - Maintenance costs - Running costs	 411,917.88 976.25	 Euro Euro

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