

Implementation of SCoRE Standards and readiness for ECMS Functional specifications

Document number: 7392

February 2025

Information in this document may not be reproduced or transmitted in any form or for any purpose, other than for intended business use, without the express written consent of Clearstream Banking. Clearstream Banking in this document refers collectively to Clearstream Banking S.A. (CBL) and Clearstream Banking AG (CBF).

Content of this document is subject to change from time to time with prior notice.

© Copyright Clearstream Banking (2024). All rights reserved.

Clearstream Banking is a Deutsche Börse Group company.

Disclaimer

Clearstream Banking is committed to inform its clients as early as possible on the ECMS Programme, accepting that the content of this document may have to be updated.

This document represents the state of information available to Clearstream Banking at publication date. The description may be subject to modifications or enhancements at a later stage of the project. In the event of modifications, Clearstream Banking will provide the respective updates in due time as further releases of this document, and will also publish specific Announcements in the meantime.

Clearstream Banking therefore makes no guarantees, representations or warranties in respect of this functional description and accepts no responsibility or liability with regard to it. Under no circumstances will Clearstream Banking be liable for any loss or damage caused by reliance on any statement made in this document.

Contacts

For further information about Clearstream Banking's products and services, clients can visit the [Clearstream website](#), contact Clearstream Banking Client Services or their Relationship Officer. Clients will find the relevant contact details under [Contacts & Client Services](#).

Particular questions regarding the ECMS Programme can be addressed to ECMS.Programme@clearstream.com and will then be routed to the corresponding experts.

Additional information

[Triparty Collateral Management - Single Collateral Management Rulebook for Europe](#)

[Corporate Actions - Single Collateral Management Rulebook for Europe](#)

[Billing Processes - Single Collateral Management Rulebook for Europe](#)

[ECMS website](#)

[ECB website](#)

[Bundesbank website](#)

[AMI-SeCo website](#)

Contents

Disclaimer	1
Contacts	1
Additional information	1
1 Introduction	3
1.1 SCoRE Overview	3
1.2 ECMS Overview	4
1.3 Clearstream Banking's ECMS Programme	4
1.4 Target audience	4
1.5 Impact on Clearstream Banking services to clients	5
1.6 Scope of this document	6
1.7 Open points	7
2 Functional Specifications – Triparty Collateral Management	8
2.1 Account setup	9
2.2 Message format	10
2.3 Initiation, increase and decrease of a triparty transaction	11
2.4 Cancellation of a triparty instruction and closure of a triparty transaction	12
2.5 Unilateral removal of a triparty transaction	13
2.6 Operating schedule	13
3 Functional Specifications – Corporate Actions	14
3.1 List of available event combinations	14
3.2 Message format	20
3.3 Corporate Action Notification	21
3.4 Corporate Action Instruction	22
3.5 Corporate Action Advice	23
3.6 Corporate Action Confirmation	24
3.7 Reversal of Corporate Action	24
3.8 Rounding rules	26
3.9 Negative cash flows	27
3.10 Business day rule	27
3.11 Payment time and notification of processing status	28
3.12 Elective events	29
4 Functional specifications – Billing	31
5 Appendix	31
5.1 Connectivity channels	31
5.2 ISO 15022 and ISO 20022 messages subscription details	32
6 Migration approach and cutover	34
7 Glossary	35

1 Introduction

1.1 SCoRE Overview

The Collateral Management Harmonisation Task Force (CMH-TF) of the Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) has identified ten areas for harmonisation within Collateral Management.

The ten Collateral Management Harmonisation Activities (CMHAs) are as follows:

- Triparty collateral management;
- Corporate actions;
- Taxation processes;
- Bilateral collateral management;
- Margin calls;
- Billing processes;
- Cut-off times;
- Collateral dynamic and static data;
- Sourcing of collateral;
- Non-Euro collateral.

To establish this harmonisation process, four dedicated Expert Groups (EG) were created, which are:

- Bilateral Collateral Management EG: The group has analysed activities on bilateral collateral management, margin calls, cut-off times and sourcing of collateral.
- Triparty Collateral Management EG: The group has analysed any questions related to the development of the single triparty model with a focus on messaging.
- Asset Servicing EG: The group has analysed issues related to corporate actions (focus on equities). Questions on billing processes have also been analysed as required.
- Taxation Processes EG: The group is responsible for reviewing taxation processes (relevant to collateral management and asset servicing).

The output of these Expert Groups is consolidated into the AMI-SeCo Single Collateral Management Rulebook for Europe (SCoRE), made up of various standard documents (standards) which are published on the ECB website. Further technical implementation documentation may also be produced.

The standards have been already agreed for the three CMHAs:

- Triparty collateral management;
- Corporate actions;
- Billing processes.

Clearstream Banking is a Member of the Collateral Management Harmonisation Task Force (CMH-TF), that formulates and monitors the implementation of the SCoRE standards and is also a key contributor within each of the Expert Groups.

SCoRE standards apply to stakeholders operating in Europe. The scope of the SCoRE standards is also understood to apply to all securities issued in (I)CSDs in Europe. This includes all securities for the AMI-SeCo markets in scope, that is, the EEA (European, Norwegian, Islandic and Liechtenstein), Swiss and UK markets. It also includes Eurobonds as well as foreign currency denominated (paying) securities issued on those markets. It does not include, however, securities originally issued in other markets or funds originally issued via transfer agents. Please refer to the AMI-SeCo documentation for further information.

1.2 ECMS Overview

ECMS is the ECB's Eurosystem Collateral Management System that will be implemented by the 19 National Central Banks of the countries which have adopted the Euro, to replace their current local collateral management systems. This project is part of ECB's Eurosystem market integration and harmonisation initiatives, which aim to develop common platforms and systems, that work across the Eurosystem for consolidation and simplification of market infrastructure services.

The main purpose is to harmonise the functionalities and the capacity of managing the assets that are used as collateral in Eurosystem credit operations for all Eurosystem jurisdictions.

- ECMS has a direct connection to T2S using the Eurosystem Shared Applications Platform (ESAP) for the settlement of marketable assets and supports auto-collateralisation.
- ECMS is based on standardised messages (ISO 20022) for the mobilisation and demobilisation of marketable assets, irrespective of the mobilisation channel used or the location of the assets.
- ECMS allows for repurposing of excess collateral to automatically increase the credit line and automatically handle Corporate Action (CA) events pertaining to Eurosystem eligible marketable assets.

Implementing ECMS leads to the following major benefits:

- A single collateral management system for Eurosystem credit operations with closer integration of securities and cash operations;
- Counterparties will no longer need to interact with different local collateral management systems;
- Harmonised collateral management & billing processes and increased re-use solutions across triparty agents;
- Harmonised corporate action events handling across Europe facilitating the exercise of shareholders' rights, with a decommissioning of the legacy system in the German market;
- Market will have a single system for managing the pools of assets used as a collateral in Eurosystem credit operations;
- Next generation communication standards for increased functionalities.

1.3 Clearstream Banking's ECMS Programme

The implementation of the first wave of AMI-SeCo SCoRE Standards by the Triparty Agents (TPA) and (International) Central Securities Depositories ((I)CSD) provides harmonised workflows and business processes with interoperable market infrastructures based on a common set of data and messaging standards (ISO 20022).

Clearstream Banking's ECMS Programme will implement the collateral management harmonisation standards set by AMI-SeCo CMH-TF Single Collateral Management Rulebook for Europe ("SCoRE") and facilitate triparty collateral management with Central Banks via the ECB's ECMS platform.

1.4 Target audience

This document is intended to be considered by all clients of Clearstream Banking S.A. (CBL), Clearstream Banking AG (CBF).

1.5 Impact on Clearstream Banking services to clients

The new standards set by SCoRE and the implementation of ECMS mean that some changes are required to comply and operate within the new environment.

The AMI-SeCo Standards will implement specific changes for triparty collateral management, corporate actions and billing, as well as the introduction of ISO 20022 messaging aligned with the new data structures.

Clearstream Banking expects to comply with SCoRE standards wherever possible and facilitate the migration to ECMS by the targeted launch date, whilst making every effort to minimise the impact on clients during these changes.

All intermediaries, including issuers and issuer agents, will be required to review potential impacts, to a greater or lesser extent. However, Clearstream Banking is already compliant with many of the new standards today, limiting impacts on clients. Those who participate in monetary policy operations will be impacted by collateral management changes. However, all clients may be impacted by changes to Corporate Action processes.

If clients do not use a TPA for collateral management and intend to communicate directly with the ECMS (Bilateral Collateral Management), message exchange with ECMS will need to be based on ISO 20022 message standards. Further information regarding GUI access to ECMS, and other ECMS based services, can be obtained from your Central Bank.

1.5.1 Triparty Collateral Management Services

Clearstream Banking S.A. (CBL) will be supporting the single harmonised TPA model and authorised by the Eurosystem to provide Triparty Collateral Management Services to all European National Central Banks connected, using ECMS. TPA collateral management services will be offered for clients with CBL, CBF or LuxCSD accounts.

Clients will have the choice to pledge assets to NCBs, that is Deutsche Bundesbank, Banque Centrale du Luxembourg or any other NCBs, using ECMS to centralise and optimise their collateral management needs within a single service provider, CBL.

Assets received as collateral in Triparty Collateral Management Service (TCMS) transactions will be available to be re-used as pledges to the applicable European NCBs.

The following main changes are in the scope of Clearstream Banking's Triparty Collateral Management area:

- Collateral pledged to central banks will be held in T2S.
- Clearstream Banking will consolidate all TPA Collateral Management Services via CBL with GUI access provided via Xact Web Portal.
- Earmarking currently used for Bundesbank pledges in Xemac will be replaced by settlement movements (as per single harmonised TPA model).
- Access for pledges to other National Central Banks (NCBs) is anticipated.
- Communication via ISO 20022 and reporting: Clearstream Banking will offer ISO 20022 messaging capability, as part of this implementation. The following changes are expected in Collateral Management messaging flows and reporting:
 - Clearstream Banking will continue to support ISO 15022 message standards, while developing ISO 20022 concurrently, in order to comply with SCoRE.
 - Clearstream Banking intends to minimise impact to market participants, as far as possible, and therefore coexistence of ISO 15022 format will be ensured. Clients will not therefore immediately be required to communicate with Clearstream Banking using ISO 20022. However, some new ISO 20022 messages may not be available in other formats, or ISO 15022 equivalents may have reduced content in comparison.

- Basic flows for collateral management will remain unchanged, however, Clearstream Banking will additionally offer ISO 20022 communication format. New processes for unilateral removal and income compensation will be implemented as well. Operating hours and cut-off times will be amended for certain transaction types.
- New and revised reporting on flows and reporting on stocks will be made available in ISO 20022 format. Reporting is harmonised and enhanced to CBL service level.

1.5.2 Corporate Actions

Clearstream Banking fully supports the introduction of corporate action harmonisation standards endorsed by AMI-SeCo. Clearstream Banking AG and Clearstream Banking S.A. are already compliant with some of the 15 standards and work is now focusing on the implementation of the remaining changes.

The following changes will be implemented in accordance with the AMI-SeCo SCoRE standards:

- ISO 20022 messages will be available to clients for corporate actions and meetings/proxy voting services.
 - The usage of ISO 20022 for clients will remain optional, but there may be some updates required to associated processes and formats of equivalent ISO 15022 messages. Meeting event messages are in ISO 20022 format exclusively since the go-live of General Meetings on 18 November 2024 to comply with the needs of the Shareholder Rights Directive II. For General Meetings Services, please refer to the [General Meetings service](#) webpage¹.
 - Clearstream Banking intends to minimise the impact on market participants, as far as possible, and will therefore ensure the coexistence of the ISO 15022 format. During the coexistence period between ISO 20022 and ISO 15022, additional coexistence rules will be applied to incoming ISO 20022 messages to ensure a one-to-one mapping with ISO 15022.
- Implementation of additional event types and/or options.
- Amendment of rounding rules. Rounding down will be used when calculating gross CA cash proceeds instead of the currently used commercial rounding.
- Modification to handling and reporting of negative cash flows for markets supporting this.
- Adaptation of business day conventions/rules.
- Harmonisation of securities amount data. Issuers/issuer's agents are to use the prescribed rules to define the denominations of the different types of instruments to new issuances.
- Notifications on the status of delayed corporate actions events will be implemented.
- Blocking rules for elective events will be harmonised and a blocking indicator will be introduced in the CA notification.

1.5.3 Billing Process

Clearstream Banking is already compliant with most SCoRE standards related to the billing processes. With the upcoming changes, clients will also be able to receive invoices in ISO 20022 format.

1.6 Scope of this document

The purpose of these Functional Specifications is to provide a comprehensive overview of these changes, to allow clients sufficient time to make their own preparations. Clearstream Banking will further provide additional information to clients in due time, such as:

¹ As a consequence, functional specifications related to Meetings are not included in this document.

- Updated Functional Specifications, where changes not covered in this document will be presented.
- Detailed Test Guide, where additional information on the testing approach, timeline and test cases will be available.
- Migration Guide, where a detailed overview regarding the migration/cut-over procedures will be given.

The timing for publication of this additional documentation will be advised in due course.

1.7 Open points

This document represents the state of information available to Clearstream Banking at publication date. The description, as well as the covered topics, may be subject to modifications or enhancements, at a later stage of the project. In the event of modifications, Clearstream Banking will provide the respective updates in due time as Announcements, and as further releases of this document.

Clearstream Banking has identified the following topics where further information will be added in later versions of this document:

- The process and account setup for handling non-T2S eligible proceeds is still under discussion with the NCBs.
- Details of the ISO 20022 Billing message will be provided in a future version.

2 Functional Specifications – Triparty Collateral Management

This chapter provides information regarding future triparty collateral management processing, focusing on the changes resulting from the implementation of SCoRE Standards and migration to the ECMS, which include functional changes and implementation of ISO 20022.

Please note that this chapter does not describe each (sub)process in full detail. It describes only as much detail as is required to explain changes to the functional logic and sequence of the various processes.

Some of the changes required to implement the SCoRE standards and to adapt to the ECMS within Clearstream Banking will have a direct impact on Clearstream Banking clients. The table below lists all mandatory impacts, irrespective of client choice regarding message format (ISO 150022 or ISO 20022), that Clearstream Banking clients must implement before go-live to ensure continuity of service.

These impacts are further detailed in the following sections.

Category	Impact type	Description	Section
Account setup	New	A Pledge Account must be opened in T2S for each CBF client pair (client/Bundesbank) and for each LuxCSD client pair (client/ Banque Centrale du Luxembourg).	2.1
Cancellation of a triparty instruction	Changes to existing process	The cancellation process will include the ability to cancel matched instructions only for future value date.	2.4
Operating hours	New	Any instructions that must be processed the same day must be received by the TPA by 17:00 at the latest. Any instructions received after this time will be rejected.	2.6
	New	Triparty Collateral Management systems need to accommodate the CLM calendar.	2.6

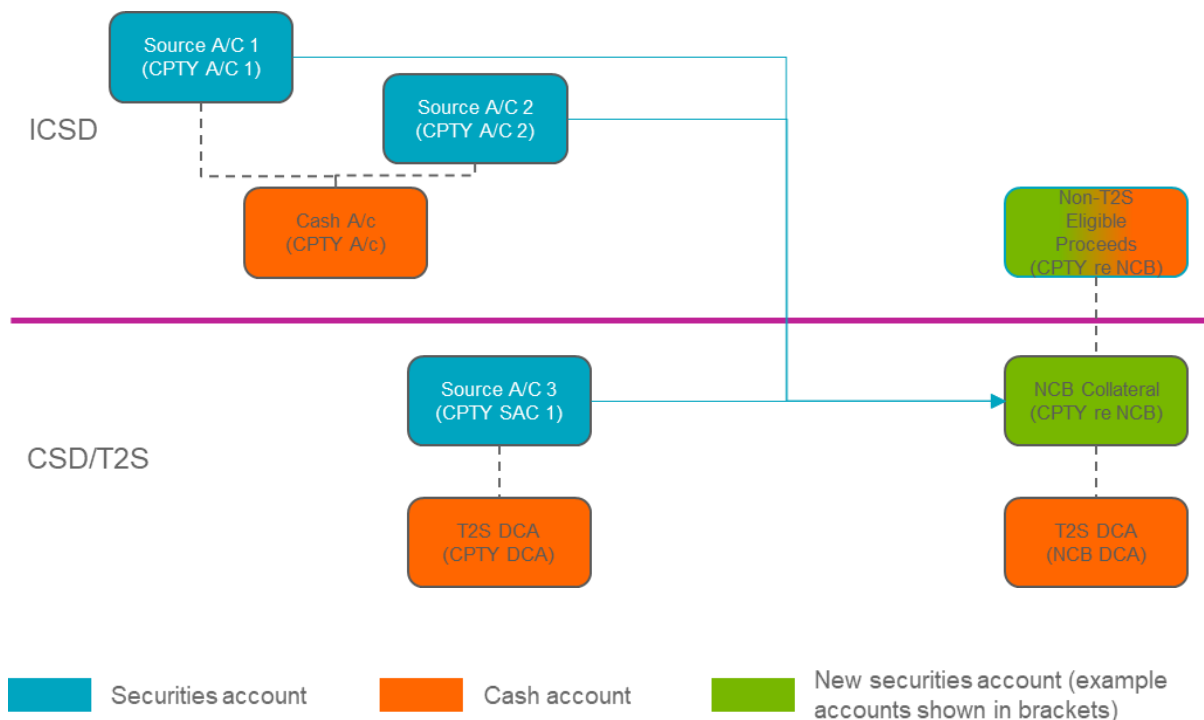
2.1 Account setup

The account structure after the implementation of the ECMS will change insofar as Central Bank model collateral accounts will have to be held in T2S. However, this account structure can also be applied to the Commercial Bank model if securities are pledged in T2S.

For bilateral collateral management, Deutsche Bundesbank has indicated that it will continue to use the same CBF account as today for the ECMS and that its CBF-I account will not be affected. Banque Centrale de Luxembourg has indicated that it will use the same LuxCSD account (assets currently under migration).

For the Triparty Collateral Management activity, segregated accounts will be used. The current substitution processes will continue (that is, for all events except tax-free income payments).

The following diagram shows the envisaged setup.



In this scenario, securities being pledged will be transferred from source accounts to the pledge account, as shown by the solid arrows. The dotted lines show links to cash accounts. It is important to note that the legal owner of the pledge account is the Collateral Giver, despite its linked cash account being that of the NCB.

Additional accounts will also exist in CBL and CBF-i, outside of T2S, for the crediting of non-T2S eligible proceeds. These accounts will be legally owned by the Collateral Taker.

2.1.1 Client impact

Impact type	Description
New	A pledge account will need to be opened in T2S for each CBF client pair (client/Bundesbank) and for each LuxCSD client pair (client/Banque Centrale du Luxembourg).

2.2 Message format

This section provides details in line with ScoRE Triparty Standard 1, whereby TPAs must support the use of ISO 20022 messages for triparty collateral management activities covered by the ScoRE standards.

Clearstream Banking will continue to support ISO 15022 message standards, whilst developing ISO 20022 concurrently, in order to comply with ScoRE. Clearstream Banking intends to minimise impact to market participants as far as possible, and therefore coexistence of ISO 15022 format will be ensured. Clients will not therefore immediately be required to communicate with Clearstream Banking using ISO 20022. However, some new ISO 20022 messages may not be available in other formats, or ISO 15022 equivalents may have reduced content in comparison.

The following ISO 20022 messages are due to be offered to clients:

ScoRE Triparty Collateral Management Message	ISO 20022 Message	ISO 15022 Message Equivalent
Instruction cancellation request	Colr.005	MT527
Transaction instruction	Colr.019	MT527
Transaction instruction processing advice	Colr.020	MT558
Allegation	Colr.021	MT558
Collateral and exposure report	Colr.022 ²	MT569
Status advice	Colr.023 ³	MT558
Cancellation of allegation	Colr.024	N/A
Unilateral removal request	Reda.074	N/A
Collateral data status advice	Reda.028	N/A

Clients wishing to communicate with Clearstream Banking in ISO 20022 for Triparty Collateral Management will need to sign up to the ECMS Triparty Collateral Management CUG until the ECMS aligns their message versioning to the registered messages.

² Colr.022: will be available in full or delta mode (delta mode will include positions reduced to zero, post settlement, even for closed exposures) and frequency of subscription will be higher than the MT569, with reports every 15 minutes.

³ Colr.023: clients will have the option to get more frequent updates. With this option, between the first allocation and full allocation, clients will get an update at every change in the settled collateral amount.

2.3 Initiation, increase and decrease of a triparty transaction

This section provides details in line with:

- ScoRE Triparty Standard 2, whereby TPAs must offer harmonised business processes and workflows for the initiation of a triparty collateral management transaction.
- ScoRE Triparty Standard 3, whereby TPAs must support harmonised business processes and workflows for the increase of a triparty collateral management transaction.
- ScoRE Triparty Standard 4, whereby TPAs must support harmonised business processes and workflows for the decrease of a triparty collateral management transaction.

2.3.1 Impact for ISO 20022 users

Impact type	Description
New	<p>Clients may create, increase or decrease triparty collateral management transactions using the following ISO 20022 messages:</p> <ul style="list-style-type: none"> - Transaction initiation using colr.019 with instruction type INIT⁴. - Transaction increase or decrease using colr.019 with instruction type PADJ.
New	In case of rejection, the sender receives rejection feedback via colr.020 with instruction status RJCTD.
New	<p>If the sender's original instruction is unmatched:</p> <ul style="list-style-type: none"> - The counterparty receives an allegation request for initiation using colr.021. - The sender receives an unmatched instruction feedback via colr.020 with matching status UMTCHD.
New	If the instruction is matched, the sender receives a matched instruction feedback via colr.020 with matching status MTCHD.
New	Once the value date is reached, the sender receives an instruction status advice via colr.020 with processing status PRCD.
New	<p>Once the value date is reached, the sender will receive an allocation and settlement status message via colr.023. This applies when the transaction is both partially and fully collateralised.</p> <p>If the counterparty has registered for unilateral instruction setup, the counterparty also receives an allocation and settlement status message via colr.023.</p>

⁴ Triparty transactions are set up in the ECMS by the National Central Bank user, using the agreed Common Transaction ID. The same Common Transaction ID must be used in any instruction sent by the counterparty to the TPA and in the reporting sent to ECMS.

2.4 Cancellation of a triparty instruction and closure of a triparty transaction

This section provides details in line with:

- ScoRE Triparty Standard 6, whereby TPAs must support harmonised business processes and workflows for the cancellation of a triparty collateral management instruction.
- ScoRE Triparty Standard 10, whereby TPAs must support harmonised business processes and workflows when closing a triparty collateral management transaction.

Following the implementation of the new standards, the process for cancellation of a triparty instruction and for closure of a triparty transaction will be modified for clients subscribed to both ISO 15022 and ISO 20022 message types.

A request for cancellation of a triparty instruction must be communicated as below:

Use case	ISO 20022	New ISO 15022	Former ISO 15022
For unmatched participants	Colr.005	MT527CANC	MT527CANC
For matched participants for future value date	Colr.005	MT527CANC	N/A

A request for closure of a triparty transaction must be communicated as below:

Use case	ISO 20022	New ISO 15022	Former ISO 15022
Open exposure for current value date	Colr.019TERM	MT527TERM	MT527CDTA
Open exposure for future value date	Colr.019CDTA	MT527CDTA	MT527CDTA

Impact type	Description
Change	Action "Cancel Unmatched" will be renamed "Cancel Instruction" and it will be allowed on unmatched instructions (no change) and on matched instructions, provided the value date of said instruction is in the future.
Change	All Decrease of Transaction Instructions that remain unmatched at end of day will be automatically cancelled.

2.4.1 Feedback process following a colr.005 for ISO 20022 users

Impact type	Description
New	If the message is rejected, the sender receives rejection feedback via colr.020 with instruction status RJCTD.
New	If the message is validated, the sender receives a cancellation status advice via colr.020 and the counterparty receives an unmatched status advice via colr.020. Where this is a pending allegation, the counterparty also receives a cancellation of an allegation instruction via colr.024.

2.4.2 Feedback process following a colr.019 for ISO 20022 users

Impact type	Description
New	If the message is rejected, the sender receives rejection feedback via colr.020 with instruction status RJCTD.
New	If (1) the sender's original instruction is unmatched and (2) the sender does not register for unilateral instruction setup: <ul style="list-style-type: none"> - The counterparty receives an allegation request for change of closing date via colr.021. - The sender receives an unmatched instruction feedback via colr.020 with matching status UMTCHD.
New	If the instruction is matched, the sender receives a matched instruction feedback colr.020 with matching status MTCHD.
New	Once the exposure is closed, the sender receives an instruction status advice via colr.020 with processing status PRCD.

2.5 Unilateral removal of a triparty transaction

This section provides details in line with SCoRE Triparty Standard 7, whereby TPAs must support harmonised business processes and workflows for the unilateral removal of a specific asset in triparty collateral management.

Please note this is only available using ISO 20022 messaging.

2.5.1 Impact for ISO 20022 users

Impact type	Description
New	Either party to a transaction may initiate unilateral removals by sending a reda.074 message for specified assets and transactions.
New	If the message is rejected, the sender receives rejection feedback via reda.028.
New	If the message is validated and after the removal process is complete, both the sender and the counterparty will receive an acknowledgement of removal request confirmation via reda.028.

2.6 Operating schedule

The following section provides information regarding the operating schedule of the TPA in relation to the ECMS activities:

Impact type	Description
New	Any triparty instructions related to an ECMS activity to be processed the same day must be received by the TPA by 17:00 at the latest. <ul style="list-style-type: none"> - Instructions received by the TPA up to 17:00 in the intended day of settlement will be processed. - Instructions received after this time for same day settlement will be rejected.

3 Functional Specifications – Corporate Actions

This chapter provides information regarding future corporate action processing, focusing on the changes resulting from the implementation of ScoRE Standards and migration to the ECMS, which include functional changes and implementation of ISO 20022.

Please note that this chapter does not describe each (sub)process in full detail. It describes only as much detail as is required to explain changes to the functional logic and sequence of the various processes.

Within this chapter, “Clients” is used to mean the following:

- For non-Collateral positions, the Clients are the Account Owners;
- For Bilateral Collateral Positions, the Clients are the Account Owners who are also the Collateral Takers;
- For Triparty Collateral Positions, the Clients are the Collateral Giver and the Collateral Taker.

3.1 List of available event combinations

This section provides details in line with:

- ScoRE CA Standard 2, whereby the CA notification, as communicated by the account servicer, must include the necessary data elements required to calculate the cash and/or securities movements.
- ScoRE CA Standard 3, whereby Investor (I)CSDs and custodians must remit information on CA and meeting events in accordance with the information received from the issuer (I)CSD. All CA and meeting event types announced by the Issuer CSD must be supported by all investor (I)CSDs/custodians. All Issuer CSDs must use CA and meeting event types in a consistent manner.

Corporate Actions events

The following corporate action event combinations (of event type, participation type and options) will be supported in both ISO 20022 and ISO 15022 with the go-live of ECMS:

CA Event ID (CAEV)	CA Event Participation Type (CAMV)	CA Event Options (COAP)
ACCU	MAND	CASH
ACTV	MAND	N/A
BIDS	VOLU	CASH
BIDS	VOLU	CTEN
BIDS	VOLU	NOAC
BONU	MAND	SECU
BONU	CHOS	SECU
BONU	CHOS	CASH
BPUT	VOLU	CASH
BPUT	VOLU	NOAC
BRUP	MAND	N/A
CAPD	MAND	CASH
CAPG	MAND	CASH
CAPI	MAND	N/A

CA Event ID (CAEV)	CA Event Participation Type (CAMV)	CA Event Options (COAP)
CERT ⁵	CHOS	QINV
CERT ⁵	CHOS	NOQU
CHAN	MAND	N/A
CHAN	MAND	SECU
CONS	VOLU	CONN
CONS	VOLU	CONY
CONS	VOLU	ABST
CONS	VOLU	NOAC
CONV	MAND	SECU
CONV	VOLU	CASE
CONV	VOLU	CASH
CONV	VOLU	SECU
CONV	VOLU	NOAC
CREV	MAND	N/A
DECR	MAND	N/A
DECR	MAND	CASH
DFLT	MAND	N/A
DLST	MAND	N/A
DRAW	MAND	CASH
DRCA	MAND	CASH
DRIP	CHOS (interim)	SECU
DRIP	CHOS (interim)	CASH
DSCL	VOLU	CONY
DSCL	VOLU	CONN
DSCL	VOLU	NOAC
DTCH	VOLU	CASH
DTCH	VOLU	NOAC
DVCA	MAND	CASH
DVCA	CHOS (for currency choice only)	CASH
DVOP	CHOS (interim)	SECU
DVOP	CHOS (interim)	CASH
DVSE	MAND	SECU
EXOF	VOLU	SECU
EXOF	VOLU	CASH
EXOF	VOLU	CASE
EXOF	VOLU	CEXC
EXOF	VOLU	NOAC
EXOF	MAND	SECU
EXOF	MAND	CASH
EXOF	MAND	CASE
EXOF	CHOS	SECU

⁵ Clearstream Banking plans to decommission the strict certification procedure for the German market using settlement messages and allowing only the standardised processing using the TEFRA D CERT event. Please refer to the CBL Client Handbook for further information.

CA Event ID (CAEV)	CA Event Participation Type (CAMV)	CA Event Options (COAP)
EXOF	CHOS	CASH
EXOF	CHOS	CASE
EXRI	CHOS	EXER
EXRI	CHOS	LAPS
EXRI	CHOS	OVER
EXTM	MAND	N/A
EXTM	MAND	SECU
EXTM	CHOS	SECU
EXTM	CHOS	MPUT
EXWA	MAND	EXER (Call Securities)
EXWA	MAND	EXER (Call Cash)
EXWA	MAND	LAPS
EXWA	CHOS	EXER (Call Securities)
EXWA	CHOS	EXER (Call Cash)
EXWA	CHOS	LAPS
EXWA	VOLU	EXER (Call Securities)
EXWA	VOLU	EXER (Call Cash)
EXWA	VOLU	NOAC
INCR	MAND	N/A
INFO	MAND	N/A
INTR	MAND	CASH
INTR	CHOS (only for currency option)	CASH
LIQU	MAND	CASH
LIQU	MAND	SECU
LIQU	MAND	CASE
MCAL	MAND	CASH
MRGR	MAND	SECU
MRGR	MAND	CASE
MRGR	CHOS	SECU
MRGR	CHOS	CASE
MRGR	CHOS	CASH
ODLT	VOLU	CASH
ODLT	VOLU	SECU
ODLT	VOLU	NOAC
OTHR	MAND	N/A
OTHR	VOLU	N/A
OTHR	CHOS	N/A
PARI	MAND	SECU
PCAL	MAND	CASH
PINK	MAND	SECU
PLAC	MAND	N/A
PPMT	MAND	SECU
PRED	MAND	CASH
PRIO	VOLU	SECU

CA Event ID (CAEV)	CA Event Participation Type (CAMV)	CA Event Options (COAP)
PRI0	VOLU	OVER
PRI0	VOLU	NOAC
REDM	MAND	CASH
REDM	MAND	SECU (relevant for reverse convertibles & equity-linked notes only)
REDM	CHOS (only for currency option)	CASH
REMK	CHOS	SECU
REMK	CHOS	CASH
RHDI	MAND	SECU
SHPR	MAND	CASH
SOFF	MAND	SECU
SPLF	MAND	SECU
SPLR	MAND	SECU
SUSP	MAND	N/A
TEND	VOLU	SECU
TEND	VOLU	CASE
TEND	VOLU	CASH
TEND	VOLU	NOAC
TEND	MAND (for equities only)	SECU
TEND	MAND (for equities only)	CASE
TEND	MAND (for equities only)	CASH
TREC	VOLU	CASH
TREC	VOLU	NOAC
WRTH	MAND	LAPS
WTRC	VOLU	NOAC
WTRC	VOLU	BOBD

Meeting events

The following meeting event combinations (of event type, participation type and options) will be supported in ISO 20022 with the go-live of General Meetings:

Meeting Event ID (CAEV)	Meeting Event Participation Type (CAMV)	Meeting Event Options (COAP)
BMET	VOLU	CAGS
BMET	VOLU	CFOR
BMET	VOLU	ABST
BMET	VOLU	NOAC
BMET	VOLU	WMGT
BMET	VOLU	AMGT
BMET	VOLU	WTHH
BMET	VOLU	ONEY
BMET	VOLU	TWOY
BMET	VOLU	THRY
CMET	VOLU	CAGS

Meeting Event ID (CAEV)	Meeting Event Participation Type (CAMV)	Meeting Event Options (COAP)
CMET	VOLU	CFOR
CMET	VOLU	ABST
CMET	VOLU	NOAC
CMET	VOLU	WMGT
CMET	VOLU	AMGT
CMET	VOLU	WTHH
CMET	VOLU	ONEY
CMET	VOLU	TWOY
CMET	VOLU	THRY
CMET	VOLU	BLNK
CMET	VOLU	CHRM
CMET	VOLU	DISC
GMET	VOLU	CAGS
GMET	VOLU	CFOR
GMET	VOLU	ABST
GMET	VOLU	NOAC
GMET	VOLU	WMGT
GMET	VOLU	AMGT
GMET	VOLU	WTHH
GMET	VOLU	ONEY
GMET	VOLU	TWOY
GMET	VOLU	THRY
GMET	VOLU	BLNK
GMET	VOLU	CHRM
GMET	VOLU	DISC
XMET	VOLU	CAGS
XMET	VOLU	CFOR
XMET	VOLU	ABST
XMET	VOLU	NOAC
XMET	VOLU	WMGT
XMET	VOLU	AMGT
XMET	VOLU	WTHH
XMET	VOLU	ONEY
XMET	VOLU	TWOY
XMET	VOLU	THRY
XMET	VOLU	BLNK
XMET	VOLU	CHRM
XMET	VOLU	DISC

Please note that the following event combinations will not be supported:

CA Event ID (CAEV)	CA Event Participation Type (CAMV)	CA Event Options (COAP)	Comments
BONU	CHOS	LAPS	Clearstream Banking will use option CASH CHOS
CAPD	CHOS (used when a currency choice is offered)	CASH	Clearstream Banking will use DVCA CHOS
CAPG	CHOS	CASH	Clearstream Banking will use DVCA CHOS
DECR	MAND	SECU	Clearstream Banking will use SPLR when the number of securities is reduced
DECR	CHOS (for currency conversion option only)	CASH	Clearstream Banking will use DVCA CHOS
DSCL	MAND	CONY	This is already supported but only as an informative template
DVSC	MAND	SECU	Clearstream Banking will use BONU or DVSE
INCR	MAND	SECU (for equities only)	Depending on the content, Clearstream Banking may issue a CHAN if no amount is credited, or BONU if an amount is credited
LIQU	CHOS	CASH	- For interim liquidation, distribution will be mapped to DVCA CHOS CASH - For final liquidation, distribution will be mapped to EXOF CHOS CASH
LIQU	CHOS	SECU	- For interim liquidation, distribution will be mapped to SOFF CHOS SECU - For final liquidation, distribution will be mapped to EXOF CHOS SECU
LIQU	CHOS	CASE	- For interim liquidation, distribution will be mapped to SOFF CHOS CASE - For final liquidation, distribution will be mapped to EXOF CHOS CASE
PINK	MAND	OTHR	Clearstream Banking will use option SECU
PLAC	MAND	SECU	Clearstream Banking will use EXOF SECU if a security exchange is involved
PPMT	CHOS	LAPS	Clearstream Banking will transform into PPMT MAND
PPMT	CHOS	SECU	Clearstream Banking will use OTHR/CHOS/SECU instead
REDO	MAND	N/A	If no change of ISIN, REDO will be sent as informative event and all changes will be processed via settlement flows. In case of a change of ISIN, processing will take place as CHAN with option SECU
REDO	MAND	SECU	If no change of ISIN, REDO will be sent as informative event and all changes will be processed via settlement flows. In case of a change of ISIN, processing will take place as CHAN with option SECU

3.2 Message format

This section provides details in line with ScoRE CA Standard 15, whereby account servicers must have the capability to support ISO 20022 messages for processing corporate actions.

ISO 20022 for clients will remain optional but there may be some updates required to associated processes and the formats of equivalent ISO 15022 messages. The usage of ISO 20022 messages will be available to clients for Corporate Actions and Meetings/Proxy voting services.

Clearstream Banking intends to minimise the impact on market participants, as far as possible, and therefore the coexistence of the ISO 15022 format will be ensured. Therefore, clients will not immediately be required to communicate with Clearstream Banking using ISO 20022. However, some new ISO 20022 messages may not be available in other formats, or ISO 15022 equivalents may have reduced content in comparison. During the coexistence period, between ISO 20022 and ISO 15022, additional coexistence rules will be applied to incoming ISO 20022 messages to ensure a one-to-one mapping with ISO 15022.

Clearstream Banking will support the receipt and delivery of the following ISO 20022 messages:

ScoRE CA/Meeting Message name	ISO 20022	ISO 15022 equivalent
Corporate Action Notification	Seev.031 (CANO)	MT564 / MT568 NEWM/REPL/RMDR
Corporate Action Event Processing Status Advice	Seev.032 (CAPS)	(MT567 EVST) ⁶
Corporate Action Instruction	Seev.033 (CAIN)	MT565 NEWM
Corporate Action Instruction Status Advice	Seev.034 (CAIS)	MT567 INST
Corporate Action Movement Preliminary Advice	Seev.035 (CAFE)	MT564 REPE
Corporate Action Movement Confirmation	Seev.036 (CACO)	MT566 NEWM
Corporate Action Movement Reversal Advice	Seev.037 (CARE)	MT566 REVR
Corporate Action Cancellation Advice	Seev.039 (CANC)	MT564 CANC/WITH
Corporate Action Instruction Cancellation Request	Seev.040 (CAIC)	MT565 CANC
Corporate Action Instruction Cancellation Request Status Advice	Seev.041 (CACS)	MT567 CAST
Corporate Action Movement Preliminary Cancellation Advice	Seev.044 (CAPC)	MT564 ADDB
Meeting Notification	Seev.001 (MENO)	MT564 / MT568 NEWM/REPL
Meeting Cancellation	Seev.002 (MECN)	MT564 CANC/WITH
Meeting Entitlement Notification	Seev.003 (MENT)	N/A
Meeting Instruction	Seev.004 (MEIN)	MT565 NEWM
Meeting Instruction Cancellation Request	Seev.005 (MEIC)	MT565 CANC
Meeting Instruction Status	Seev.006 (MEIS)	MT567 INST/CAST

⁶ This message is not generated by Clearstream Banking.

ScoRE CA/Meeting Message name	ISO 20022	ISO 15022 equivalent
Meeting Vote Execution Confirmation	Seev.007 (MECO)	N/A
Meeting Result Dissemination	Seev.008 (MERD)	MT568
Meeting Fee Confirmation	Seev.031 (CONS MAND)	MT566

[Some recommendations have been published by SMPG to facilitate the coexistence of Corporate Actions messages between ISO 15022 and ISO 20022 Standards, as outlined in the following document: SMPG Statement on Coexistence of Corporate Action Messages between ISO 15022 & ISO 20022 Standards.](#)

3.3 Corporate Action Notification

This section provides details in line with ScoRE CA Standard 1A, whereby the account servicer must notify the account owner about the details of a CA event in accordance with a set of harmonised business processes, workflows and key data elements.

3.3.1 Client impact

3.3.1.1 Impact for all clients

Impact type	Description										
Change	The Safekeeping Place Type will be populated as described in the table below, for messages MT564, seev.031, seev.035 CA ^{FE} and seev.044 CAPC:										
	<table border="1"> <thead> <tr> <th>Entity</th> <th>Future (CBF, CBL and LuxCSD)</th> </tr> </thead> <tbody> <tr> <td>CBF as Issuer CSD</td> <td>"NCSD" and BICCODE of CBF (DAKVDEFFXXX)</td> </tr> <tr> <td>CBL as Issuer CSD</td> <td>"ICSD" and BICCODE of CBL (CEDELULLXXX)</td> </tr> <tr> <td>LuxCSD as Issuer CSD</td> <td>As today</td> </tr> <tr> <td>Investor CSD links</td> <td>As today</td> </tr> </tbody> </table>	Entity	Future (CBF, CBL and LuxCSD)	CBF as Issuer CSD	"NCSD" and BICCODE of CBF (DAKVDEFFXXX)	CBL as Issuer CSD	"ICSD" and BICCODE of CBL (CEDELULLXXX)	LuxCSD as Issuer CSD	As today	Investor CSD links	As today
	Entity	Future (CBF, CBL and LuxCSD)									
	CBF as Issuer CSD	"NCSD" and BICCODE of CBF (DAKVDEFFXXX)									
	CBL as Issuer CSD	"ICSD" and BICCODE of CBL (CEDELULLXXX)									
LuxCSD as Issuer CSD	As today										
Investor CSD links	As today										

3.3.1.2 Impact for ISO 20022 users

Impact type	Description
New	Clients may receive CA Notification, CA Notification Replacement and CA Notification Reminder via seev.031 CANO.
New	Clients may receive CA Cancellation/Withdrawal via seev.039 CANC.

3.3.1.3 Impact for ISO 15022 users

Impact type	Description
Change	Corporate Action Notification – MT564 CA including: <ul style="list-style-type: none"> - Revocability period, which should always be associated to either Change Allowed Indicator (CHAN) or Withdrawal Allowed indicator (WTHD); - End of Securities Blocking Period indicator (BLOK) for all events where blocking is required;

Impact type	Description
	<ul style="list-style-type: none"> - Earliest Payment Date for cash proceeds only when payment date falls on a non-business day; - A negative sign "N" in rate field whenever the interest rate for an Interest Payment event is negative; - Maximum Quantity to Instruct.
Change	Additional options to express the NEWO rate will be made available in the Corporate Action notification: "AmtToAmt", "QtyToAmt" and "AmtToQty".
Change	An additional option to express the ADEX rate will be made available in the Corporate Action notification: "AmtToAmt".

3.4 Corporate Action Instruction

This section provides details in line with SCoRE CA Standard 1B, whereby instructions for elective corporate actions must be processed in accordance with a set of harmonised business processes, workflows and key data elements.

3.4.1 Client impact

3.4.1.1 Impact for ISO 20022 users

Impact type	Description
New	Clients may send CA Instruction via seev.033 CAIN message.
New	Clients may send CA Instruction Cancellation Request via seev.040 CAIC message.
New	<p>If a CA Instruction has been received by Clearstream Banking, clients may receive a CA Instruction Status Advice via seev.034 CAIS.</p> <p>In the case of a CHOS event, if no CA Instruction has been received by Clearstream Banking (that is, the default option is chosen when no action is taken by clients), clients may receive a CA Instruction Status Advice via seev.034 CAIS at the end of the exercise period (indicating "DFLA Default Action"), upon subscription only.</p> <p>In the case of a VOLU event, if no CA Instruction has been received by Clearstream Banking and if the default option is NOAC, no seev.034 CAIS will be sent to clients.</p>
New	Clients may receive CA Instruction Cancellation Request Status Advice via seev.041 CACS.

3.4.1.2 Impact for ISO 15022 users

Impact type	Description
New	<p>In the case of a CHOS event, if no CA Instruction has been received (that is, the default option is chosen when no action is taken by clients), clients may receive a CA Instruction Status Advice via MT567 INST, at the end of the exercise period ("DFLA Default Action"), upon subscription only.</p> <p>In the case of a VOLU event, if no CA Instruction has been received by Clearstream Banking and if the default option is NOAC, no seev.034 CAIS will be sent to clients.</p>

3.5 Corporate Action Advice

This section provides details in line with ScoRE CA Standard 1C, whereby the account servicer must provide preliminary advice notifications in accordance with a set of harmonised business processes, workflows and key data elements.

3.5.1 Client impact

3.5.1.1 Impact for ISO 20022 users

Impact type	Description
New	<p>Clients may receive NEWM and REPL as movement preliminary advice via seev.035 CAFE message.</p> <p>CAE messages:</p> <ul style="list-style-type: none"> - will be available at end of record date (that is, end of business day of the relevant settlement system), upon subscription only. - will include the field "Safekeeping Place Type".
New	<p>Clients may receive incoming seev.044 CAPC message for CA movement preliminary advice cancellation advice. This may be sent when the CA is canceled and the resulting entitlement is reduced to zero, or a previously announced reversal has been canceled.</p>

3.5.1.2 Impact for ISO 15022 users

Impact type	Description
Change	The MT564 Income Pre-Advice Report (IPAR) will be updated to cover all supported CA event type entitlement reversals, plus any additional event type combinations mentioned in section 3.1 of this document.
Change	IPAR including Earliest Payment Date only when the payment date falls on a non-business day.
New	The field Gross Amount (19b::GRSS) will be reported in the IPAR.
Change	Once a Corporate Action instruction is received and processed, the updated Income Pre-Advice Report (IPAR).will only contain the option elected by the client. Uninstructed options will no longer be visible on the IPAR.
New	<p>The PROR rate will be updated before payment execution. An updated IPAR containing the PROR rate will be sent before a Corporate Action confirmation is sent. This is applicable for the following event types:</p> <ul style="list-style-type: none"> • BIDS VOLU – Under CASH and CTEN option • BPUT VOLU – Under CASH option • DTCH VOLU – Under CASH option
Change	Additional options to express the NEWO rate will be made available in the IPAR: "AmtToAmt", "QtyToAmt" and "AmtToQty".
Change	An additional option to express the ADEX rate will be made available in the IPAR: "AmtToAmt".

3.6 Corporate Action Confirmation

This section provides details in line with ScoRE CA Standard 1D, whereby the account servicer must confirm that a corporate action has been carried out in accordance with a set of harmonised business processes, workflows and key data elements.

3.6.1 Client impact

3.6.1.1 Impact for ISO 20022 users

Impact type	Description
New	Clients may receive CA movement confirmation via seev.036 CACO including a "Safekeeping Place Type" field.
New	Clients may receive CA event processing status advice via seev.032 including a "Safekeeping Place Type" field. These impacts also cover the requirement for CA Standard 9 (see section 3.11).
New	Once the resulting proceeds of the CA event have been credited/debited to/from clients' accounts, clients may receive CA Movement Confirmation via seev.036.
New	Clients may receive a credit/debit confirmation via camt.054.

3.6.1.2 Impact for ISO 15022 users

Impact type	Description
Change	Corporate Action Confirmation – MT566 CA. Rate field will now include a negative sign "N" whenever the interest rate for an Interest Payment event is negative.
New	The field Gross Amount (19b::GRSS) will be reported in the MT566 Corporate Action confirmation when reported in the IPAR.
New	The field Gross Amount (19b::GRSS) will be reported in the MT566 Corporate Action confirmation when reported in the Claim and Reversal Advice (CRA) report.
Change	Additional options to express the NEWO rate will be made available in the Corporate Action confirmation: "AmtToAmt", "QtyToAmt" and "AmtToQty".
Change	An additional option to express the ADEX rate will be made available in the Corporate Action confirmation: "AmtToAmt".

3.7 Reversal of Corporate Action

This section provides details in line with:

- ScoRE CA Standard 1E, whereby the account servicer must carry out the reversal of a corporate action in accordance with a set of harmonised business processes, workflows and key data elements.
- ScoRE CA Standard 13, whereby a pre-advice message must be issued in advance of any reversal of a corporate action. In the event of a cash reversal, the pre-advice must be sent sufficiently in advance of the reversal so that recipients have adequate time for cash management.

3.7.1 Client impact

3.7.1.1 Impact for ISO 20022 users

Impact type	Description																						
New	<p>Clients may receive a reversal notification mentioning the Reversal Reason via Movement Preliminary Advice seev.035 CAFE.</p> <p>Note: In order to distinguish between the CAFE message sent for reversal advice and the CAFE message sent for CA entitlement, clients should refer to the presence of the field "reversal reason".</p>																						
New	Clients may receive a cancellation of a reversal notification via Movement Preliminary Advice Cancellation Advice seev.044 CAPC.																						
New	Clients may receive a confirmation of reversal via Movement Reversal Advice seev.037 CARE mentioning the reversal reason.																						
New	Clients may receive a credit/debit confirmation via camt.054.																						
New	<p>The reversal pre-advice message <u>will</u> include information on the reason for the reversal. A list of possible reversal reasons are included in the table below:</p> <table border="1"> <thead> <tr> <th>Reason</th> <th>Reason Code</th> </tr> </thead> <tbody> <tr> <td>Day Count Basis Difference</td> <td>DCBD</td> </tr> <tr> <td>Incorrect Value Date</td> <td>IVAD</td> </tr> <tr> <td>Incorrect Record Date</td> <td>IRED</td> </tr> <tr> <td>Incorrect Price</td> <td>IPRI</td> </tr> <tr> <td>Undue Payment</td> <td>UPAY</td> </tr> <tr> <td>Incorrect Event Level Tax Rate</td> <td>IETR</td> </tr> <tr> <td>Incorrect Payment Currency</td> <td>IPCU</td> </tr> <tr> <td>Funds Not Received</td> <td>FNRC</td> </tr> <tr> <td>Payment Outside Clearing System</td> <td>POCS</td> </tr> <tr> <td>Narrative Reason</td> <td>NARR</td> </tr> </tbody> </table>	Reason	Reason Code	Day Count Basis Difference	DCBD	Incorrect Value Date	IVAD	Incorrect Record Date	IRED	Incorrect Price	IPRI	Undue Payment	UPAY	Incorrect Event Level Tax Rate	IETR	Incorrect Payment Currency	IPCU	Funds Not Received	FNRC	Payment Outside Clearing System	POCS	Narrative Reason	NARR
Reason	Reason Code																						
Day Count Basis Difference	DCBD																						
Incorrect Value Date	IVAD																						
Incorrect Record Date	IRED																						
Incorrect Price	IPRI																						
Undue Payment	UPAY																						
Incorrect Event Level Tax Rate	IETR																						
Incorrect Payment Currency	IPCU																						
Funds Not Received	FNRC																						
Payment Outside Clearing System	POCS																						
Narrative Reason	NARR																						

3.7.1.2 Impact for ISO 15022 users

Impact type	Description				
Change	The Claim and Reversal Advice (CRA) report will be updated to cover all supported CA event type entitlement reversals, plus any additional event type combination mentioned in section 3.1 of this document, <u>excluding CHOS and VOLU events</u> .				
<u>New</u>	<u>The field Gross Amount (19b::GRSS) will be reported in the MT564 Claim and Reversal Advice (CRA) report.</u>				
<u>Change</u>	<u>The effective date of the reversal will be reported in the Pay Date field as part of the Claims and Reversal Advice (CRA) report.</u>				
New	<p>The reversal pre-advice message will include information on the reason for the reversal. A list of possible reversal reasons are included in the table below:</p> <table border="1"> <thead> <tr> <th>Reason</th> <th>Reason Code</th> </tr> </thead> <tbody> <tr> <td>Day Count Basis Difference</td> <td>DCBD</td> </tr> </tbody> </table>	Reason	Reason Code	Day Count Basis Difference	DCBD
Reason	Reason Code				
Day Count Basis Difference	DCBD				

Impact type	Description
	Incorrect Value Date IVAD Incorrect Record Date IRED Incorrect Price IPRI Undue Payment UPAY Incorrect Event Level Tax Rate IETR Incorrect Payment Currency IPCU Funds Not Received FNRC Payment Outside Clearing System POCS Narrative Reason NARR
New	<p>The PROR rate will be updated before payment execution. An updated Claim and Reversal Advice (CRA) report containing the PROR rate will be sent before a Corporate Action confirmation is sent. This is applicable for the following event types:</p> <ul style="list-style-type: none"> BIDS VOLU – Under CASH and CTEN option BPUT VOLU – Under CASH option DTCH VOLU – Under CASH option
Change	<p>Additional options to express the NEWO rate will be made available in the Claim and Reversal Advice (CRA) report: “AmtToAmt”, “QtyToAmt” and “AmtToQty”.</p>
Change	<p>An additional option to express the ADEX rate will be made available in the Claim and Reversal Advice (CRA) report: “AmtToAmt”.</p>

This process also covers the reversal of retrocession payments for Triparty Collateral Management positions.

3.8 Rounding rules

This section provides details in line with ScoRE CA Standard 4, whereby harmonised rounding rules should be applied for calculating cash payments and securities movements.

3.8.1 Client impact

Impact type	Description
Change	Rounding down will now be applied to the gross amount resulting from a corporate action cash payment (versus commercial rounding). This is without prejudice to the potential application of other rounding rules when Clearstream Banking acts as the last intermediary in the holding chain (for example, as tax agent for DE ISINs). In cases where Clearstream Banking acts as a tax agent, Clearstream Banking will continue to apply the current rounding rules required by the respective tax authorities, that is there will be no change to these rules as they depend on the current guidance of the tax authorities, for example, for some elements of the German withholding tax calculations, which will continue to be rounded up (KESt.), while the solidarity tax (SolZ) will be rounded down.

3.9 Negative cash flows

This section provides details in line with ScoRE CA Standard 5, whereby Issuer CSDs and Investor CSDs must support the processing of corporate actions where the underlying security has a fixed negative interest rate or a floating rate coupon. Any negative interest will result in a cash flow from the investor to the issuer which should be processed using the Interest Payment (INTR) event.

3.9.1 Client impact

Impact type	Description
New	<p>For both Issuer CSD and Investor CSD business:</p> <ul style="list-style-type: none"> - Securities with a fixed negative interest rate are not eligible in Clearstream Banking, and this condition is already part of the current acceptance process. If such a security is accepted in error, the acceptance will be revoke, and the security should be removed. - Securities with floating interest rate resulting in a negative coupon amount cannot be identified during the acceptance phase. if this occurs, the payment will be floored at zero. - The only negative coupons that will be processed are those of Danish Securities, paid simultaneously with PCAL events (that is, INTR/PCAL linked events), and resulting in no net negative cash flow. This applies to both fixed interest rate instruments and floating interest rate instruments.

3.10 Business day rule

This section provides details in line with ScoRE CA Standard 6, whereby if the payment date of a corporate action falls on a non-business day (in the country of the currency in which the payment is due), the payment should be made on the next business day. If the next business day falls in the following month and the payment needs to be made in the same month, then the calculation period shall be adjusted, and the payment date and the record date shall move back one day.

3.10.1 Client impact

Impact type	Description
Change	<p>ScoRE compliant business day conventions:</p> <ul style="list-style-type: none"> - Following Unadjusted; - Following Adjusted; - Modified Following Adjusted. <p>CBF-issued securities:</p> <ul style="list-style-type: none"> - For newly issued securities, only those compliant with ScoRE business day conventions will be eligible in CBF. - For existing securities, there is no change compared to today. Securities will remain eligible in CBF in line with SCoRE business day conventions.

Impact type	Description
	<p>There is change to CBF acceptance rules for investor CSD securities. The compliance to this standard should be ensured by the domestic issuer CSD.</p> <p>CBL issued securities:</p> <p>As business day convention is not part of today's eligibility criteria in CBL, CBL will continue to accept securities with any business day convention.</p> <p>Please note that for international securities held in T2S, corporate action cash proceeds are paid in central bank money, and therefore cannot be processed under Modified Following Unadjusted, Modified Previous Unadjusted, or Previous Unadjusted conventions. In such cases, such proceeds will always be paid on the following business day.</p> <p>In addition, if no business day convention is specified in the Terms and Conditions of the issue, Clearstream Banking will apply the following rules by default:</p> <ul style="list-style-type: none"> - Following Unadjusted for fixed rate notes; - Following Adjusted for floating rate notes. <p>Only securities issued with one of the three SCoRE compliant business day conventions will be eligible for ECMS collateral management activity.</p>

3.11 Payment time and notification of processing status

This section provides details in line with:

- SCoRE CA Standard 8, whereby:
 - For European currencies, the cash proceeds of a corporate action should be distributed by Issuer CSDs, as early as possible, but no later than 12:00 noon on the payment date (Issuer CSD time).
 - For non-European currencies, the cash proceeds of a corporate action should be distributed by Issuer CSDs, as early as possible, but no later than 16:30 on the payment date (Issuer CSD time).
 - If the corporate action event would result in both cash and security movements, then the transactions for the debit (or credit) of securities and credit (or debit) of cash proceeds must be executed simultaneously.
- SCoRE CA Standard 9, whereby if an issuer, issuer's agent or Issuer CSD cannot process a corporate action on the previously announced payment date, all account servicers must inform account owners about the delay, as soon as possible, based on information received from higher up the custody chain.

3.11.1 Client impact

Impact type	Description
New	<p>Only for events with a known due date (for example, payment date, settlement date or value date), from the due date until the Event Processing Status for the respective corporate action is complete or until a grace period of 30 days after the payment date has been reached, the CA Event Processing Status Advice (seev.032) for any given proceeds should be sent as follows:</p> <p>For the first message, this must be sent to clients either:</p> <ul style="list-style-type: none"> - immediately upon receipt of a CA Event Processing Status Advice from the issuer/agent, Issuer CSD, depository or local partner, or if any issues arise at Clearstream Banking which impact the payment of CA proceeds; or - if no information has already been sent, according to the following schedule: <ul style="list-style-type: none"> - At 09:15: <ul style="list-style-type: none"> o For events paying cash, cash and securities or securities only (for the Investor CSD model only), denominated in currencies operating in time zones C (GMT+3) to M (GMT+12), where cash and/or securities proceeds have not been paid to clients by 09:00; or o For events paying securities only (for the Issuer CSD model only), where securities proceeds have not been paid to clients by 09:00; - At 12:15: <ul style="list-style-type: none"> o For events paying cash or cash and securities denominated in currencies operating in time zones Z (GMT+0) to B (GMT+2), where cash and/or securities proceeds have not been paid to clients by 12:00; or o For events paying securities only, where securities proceeds have not been paid to clients by 12:00; - At 16:45: For events paying cash, cash and securities or securities only (for the Investor CSD model only), denominated in currencies operating in time zones N (GMT-1) to Y (GMT-12) where cash and/or securities proceeds have not been paid to clients by 16:30. <p>For subsequent messages, immediately upon receipt of a CA Event Processing Status Advice from the other parties.</p>

3.12 Elective events

This section provides details in line with SCoRE CA Standard 10, whereby:

- For all mandatory with options and voluntary CA events involving a debit of securities, all intermediaries must ensure that the elected security position is subject to soft blocking if the election is received ahead of the deadline. Intermediaries will show the elected quantity as an instructed quantity therefore 'unavailable' for settlement in their reporting.
- Upon receipt of the election, Issuer CSDs will also ensure the elected quantity is separated accounting wise. The elected quantity should remain separated accounting wise from the time the CA instruction is accepted until (i) the CA event is executed (when the debit takes place) or (ii) until an instruction is cancelled (for revocable instructions).
- For mandatory with options CA events, Issuer CSDs should ensure settlement does not occur after the Market Deadline.

3.12.1 Client impact

Impact type	Description
New	<p>The "End of Securities Blocking Period" field will be systematically populated in the corporate action notification message whenever the corporate action event requires a debit of the base security in the case of reorganisation events.</p> <p>Upon receipt of an election instruction for an option that was announced with a notification containing "End of Blocking Period", Clearstream Banking will block the instructed quantity from the time the instruction has been processed until the date described in the "End of Blocking Period" field or until the debit of securities is effective for reorganisation events.</p>
New	<p>The "End of Securities Blocking Period" field will be populated with the code "PAYD" or the value of the payment date, indicating the relevant balances are blocked until the actual payment date of the debit of securities for the respective event. If an event has different payment dates (for example, for cash and securities), then "NARR" may be used in the "End of Securities Blocking" field and the Narrative field will specify which dates will be the unblocking date for each specific entitlement. If a specific date or time is available (for example, for meeting events), the "NARR" field may be populated with that date/time.</p>
New	<p>Blocking should be implemented and therefore the "EndOfScitiesBlckgPrd" field should be populated for event combinations where either of the following criteria is met:</p> <ul style="list-style-type: none"> - the CA event/participation type is mandatory with choice (CHOS); or - the CA event/participation type is voluntary (VOLU). <p>The above applies only in the case of events which involve debit to the base security.</p> <p>Blocking will also be applied for the following Event Type/Participation Type/option combinations that are not in scope of the SCoRE CA standards but are supported by Clearstream Banking and follow the generic rule for blocking (CHOS/VOLU events with debit of securities) or where fees may be payable (for the CONY/CONN/ABST options) if blocking is required by the issuer/issuer agent)/market practice:</p> <ul style="list-style-type: none"> - BIDS VOLU (SECU/CONY/CONN/ABST) - DTCH VOLU SECU - EXOF VOLU SLLE - EXOF CHOS SLLE - EXRI CHOS SLLE - EXWA VOLU SLLE - MRGR CHOS SLLE - ODLT VOLU SLLE - OTHR CHOS (OTHR/EXER/ABST/CEXC/CONN/CONY/CASE/CASH/SECU) - OTHR VOLU (OTHR/EXER/ABST/CEXC/CONN/CONY/CASE/CASH/SECU) - TEND VOLU (CTEN/CONY/CONN/ABST)

4 Functional specifications – Billing

Clients will have the opportunity to subscribe for monthly invoices to be sent using ISO 20022 camt.077 message, in addition to their existing invoices⁷. The message will adhere to the AMI-SeCo guidelines on message usage and full message details will be published in due course.

5 Appendix

5.1 Connectivity channels

Impact type	Description						
New	ISO 20022 will be implemented across connectivity channels as follows:						
	<table border="1"><thead><tr><th>Channels</th><th>Format Options</th></tr></thead><tbody><tr><td>Swift (Fin & Fileact)</td><td>(Delta) ISO 15022, ISO 20022</td></tr><tr><td>Xact Web Portal</td><td>ISO</td></tr></tbody></table>	Channels	Format Options	Swift (Fin & Fileact)	(Delta) ISO 15022, ISO 20022	Xact Web Portal	ISO
	Channels	Format Options					
Swift (Fin & Fileact)	(Delta) ISO 15022, ISO 20022						
Xact Web Portal	ISO						

⁷ Clearstream Banking will continue to support PDF for invoices.

5.2 ISO 15022 and ISO 20022 messages subscription details

5.2.1 Triparty Collateral Management

Report type	Timing / trigger	Granularity / resource type	Channel options	Mode	Options
colr.020	Immediate / Change of status	PSC + POA	• Swift InterAct / FileAct	• Delta	N/A
colr.021	Immediate / Change of status	PSC + POA	• Swift InterAct / FileAct	• Delta	N/A
colr.022 CR	Daily / Intra-Day	PSC + POA + Contracts	• Swift InterAct / FileAct	• Delta / Full	<ul style="list-style-type: none"> • Summary / Complete • Reporting Currency • Empty Possible
colr.022 CG	Daily / Intra-Day	PSC + POA + Contracts	• Swift InterAct / FileAct	• Delta / Full	<ul style="list-style-type: none"> • Summary / Complete • Reporting Currency • Empty Possible
colr.023	<ul style="list-style-type: none"> • Change of Status • Change in Confirmed Book 	PSC + POA	• Swift InterAct / FileAct	• Delta	N/A
colr.024	<ul style="list-style-type: none"> • Change of Status 	PSC + POA	• Swift InterAct / FileAct	• Delta	N/A
reda.028	<ul style="list-style-type: none"> • By batch: <ul style="list-style-type: none"> ○ 15h30 ○ 16h30 ○ 17h30 ○ EOD 	PSC + POA	• Swift InterAct / FileAct	N/A	<ul style="list-style-type: none"> • Rejections only / Confirmations & Rejections
MT558	<ul style="list-style-type: none"> • Change of Status 	PSC + POA	• Swift FIN	• Delta	N/A
Also applicable to LuxCSD/T2S accounts.					
MT569	<ul style="list-style-type: none"> • Daily / Intra-Day 	PSC + POA	• Swift FIN	• Complete	<ul style="list-style-type: none"> • Summary / Complete • Reporting Currency
Also applicable to LuxCSD/T2S and CBF/T2S accounts.					

Clients will be able to select to use the relevant T2S account number in place of their Clearstream Banking account number in communications with Clearstream Banking.

5.2.2 Corporate Actions

Report type	Timing / trigger	Granularity / resource type	Channel options	Mode	Options
MT564 CRA	As current	As current	As current	As current	As current
This subscription will be increased to also cover CA event types with entitlement (cash or securities) currently supported, plus any additions that are described in CA Standard 3.					
MT564 REPE	As current	As current	As current	As current	As current
This subscription will be increased to also cover:					
<ul style="list-style-type: none"> Any currently supported event types with entitlement (cash or securities) that are currently not included in MT564 REPE (DVOP, ODLT, EXTM, TREC, REMK). Any new event types with entitlement (cash or securities) that are described in Standard 3. 					
MT564 RMDR	1) In real time after receipt of incoming RMDR 2) 1 day before Clearstream CA instruction deadline.	N/A	<ul style="list-style-type: none"> Swift FIN 	N/A	N/A
Reminders will be generated only if the client has an uninstructed position in the event. This reporting will be optional, that is, with the possibility to opt out from receiving reminders under the CA notification subscription.					
MT567	Realtime	N/A	<ul style="list-style-type: none"> Swift FIN 	N/A	
Where default options are applied and no instructions have been received, a CA Instruction Status Advice will be sent at the end of the exercise period.					
seev.031 and seev.039	Deadline – TBD	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	N/A	As ISO 15022 MT564 <ul style="list-style-type: none"> It will be possible for clients to opt-out of reminders
seev.032	See ScoRE CA Standard 8 – Payment time, and ScoRE CA Standard 9 – Notification of processing status	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	<ul style="list-style-type: none"> Delta 	<ul style="list-style-type: none"> Applicable Events / Selected Events All Currencies / Select Currencies
seev.034	Realtime	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	N/A	As ISO 15022 MT567 <ul style="list-style-type: none"> This will include an option to receive a status advice where default options have been applied and no instructions have been received
seev.035 (excl. Reversals)	As for MT564 REPE	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	As for MT564 REPE	As ISO 15022 MT564 REPE, plus: <ul style="list-style-type: none"> Send final entitlement report on RD/entitlement date (even if no updates) Note: The event type selection will include new event types added to MT564 REPE: DVOP, ODLT, EXTM, TREC, REMK Note: The event type selection will include event types with entitlement (cash or securities) that are described in Standard 3
seev.035 Reversals	As for MT564 CRA	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	As for MT564 CRA	<ul style="list-style-type: none"> Applicable Events vs Selected Events Note: The event type selection will include new

Report type	Timing / trigger	Granularity / resource type	Channel options	Mode	Options
					event types added to MT564 CRA
seev.036	As for MT566 NEWM	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	N/A	As for MT566 NEWM (except if not possible): Option to suppress text (TRANO) from sequence C
seev.037	As for MT566 REVR	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	N/A	As for MT566 REVR (except if not possible): Option to suppress text (TRANO) from sequence C
seev.044 (Not available without first subscribing to seev.035)	Realtime	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	N/A	No options are required as seev.044 will only be sent where a previous seev.035 has already been sent
seev.044 Reversals	As for MT564 CRA	N/A	<ul style="list-style-type: none"> Swift InterAct / FileAct 	As for MT564 CRA	No options are required as seev.044 (Reversal) will only be sent where a previous seev.035 (Reversal) has already been sent

Clients will be able to use the relevant T2S Account number in place of their Clearstream Banking account number in communications with Clearstream Banking.

5.2.3 Billing

Clients will have the opportunity to subscribe to monthly invoices to be sent using the ISO 20022 camt.077 message. Further details will be published in due course.

6 Migration approach and cutover

Clearstream Banking will provide further information in due course.

7 Glossary

Acronym or abbreviation	Description
AMI-SeCo	Advisory Group on Market Infrastructures for Securities and Collateral
BBK	Deutsche Bundesbank
BCL	Banque Centrale du Luxembourg
CA	Corporate Action
CBF	Clearstream Banking AG
CBL	Clearstream Banking S.A.
CLM	Central Liquidity Management
CMHA	Collateral Management Harmonisation Area
CMH-TF	Collateral Management Harmonisation Task Force
CMSA	Collateral Management Service Agreement
CRA	Claim and Reversal Advice
CUG	Closed User Group
ECB	European Central Bank
ECMS	Eurosystem Collateral Management System
EG	Expert Group
NCB	National Central Bank
POA	Power of Attorney
PSC	Participant Short Code
SCoRE	Single Collateral Management Rulebook for Europe
TCM	Triparty Collateral Management
TCMS	Triparty Collateral Management Service
TPA	Triparty Agent
T2S	TARGET2-Securities
T&C	Terms and Conditions