

Eurex Clearing - C7 SCS 2.0

C7 SCS 2.0 - Release Notes (Final Version)

Eurex Clearing AG

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Abstract

As a part of Eurex Clearing's strategic roadmap, Eurex Clearing proceeds with the migration of Repo Clearing to the C7 architecture. The new securities clearing system C7 SCS was already introduced with Release 1.0 for all transactions involving CCP-eligible instruments concluded at the Frankfurt Stock Exchange (MICs: XETR and XFRA) and for all transactions concluded at Eurex Deutschland (MIC: XEUR) that result in securities transactions. With C7 SCS Release 2.0, all transactions that are concluded at Eurex Repo (MIC: XERE) and accepted by Eurex Clearing via either Open Offer or novation, will be migrated.

Due to Eurex Clearing's project, members are impacted to support the implementation of the Clearstream Collateral Mobility project, aiming at decommissioning the CBFs Xemac collateral management system, and migrate collateral products into the existing collateral management system CmaX of CBL.

The timeline for C7 SCS Release 2.0 is as follows:

- Start of Simulation: 20.06.2022
- Start of Production: 24.10.2022

Changes introduced within this document:

Chapter 2.3: New naming conventions (launched 15.07.2022) for clearing licenses are added

Chapter 4.2.1: Details added regarding the determination of surplus- and offset blocks respectively

Chapter 9: Information on the new Intra-day Settled Trade Report (CI870) is added

Chapter 10: Migration Strategy information for Production is added

Chapter 10.3: New chapter is added that provides information on Migration report instances

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1 Introduction

This document provides an overview of the functionality covered and available for Repo clearing with the C7 Securities Clearing Service (C7 SCS).

After the introduction, in Chapter 2, an overview of the functional scope of clearing Repo and GC Pooling with C7 SCS will be provided. Chapter 3 then describes Services offered with C7 SCS. Detailed approach to Settlement Date Netting can be found in Chapter 4. Extensive information to Delivery Management and Exposure Management are to be found in Chapters 5 and 6 respectively. Chapter 7 introduces Trading and Settlement Timelines. Corporate Action Processing is described in Chapter 8, followed by Chapter 9, which gives an overview to Reporting. Chapter 10 gives details to Migration Approach. In addition, Chapter 11 outlines Xemac decommissioning for Eurex Clearing members, who use Xemac today to provide margin collateral and Default Fund contributions.

In this document, the term “Repo” refers to both Special repo as well as GC Pooling repo. The term Special repo refers to both Special repo and GC (General Collateral) repo. All documents, which will be created in connection with the introduction of C7 SCS Release 2.0, will be made available for download on the Eurex Clearing website. Details on the publication dates can be found in the Eurex Clearing Member Communication Calendar, which is also available under the following path:

www.eurex.com/ec-en/support/initiatives/c7-scs-releases/C7-SCS-Releases-2396668?frag=2631074

Important: The C7 SCS Release 2.0 with planned Go-live date on the 24th of October 2022¹ is a mandatory release for all members of Eurex Clearing such as Clearing Members, DC Market Participants, and respective Settlement Institutions (SI).

1.1 Overview of the Functionality

The following list provides a functional overview of the features given to participants for Special repo with C7 SCS:

- Settlement Date Netting (SDN) replaces the current Actual Settlement Day Netting (ASDN) for Special repo, where pending Delivery Instructions are described that are not cancelled by Eurex Clearing. Pending Delivery Instructions at the (I)CSDs will not be cancelled by Eurex Clearing during daily cleanups and will not be considered again for netting.
- Participants have the following choice for the Processing Method setting: Netting (default), Gross Processing. Selection must be performed at the Clearing Member and Settlement account level.
- Participants have the following choice for the Netting Method setting: Single Instruction Netting (default), Dual Instruction Netting. Selection must be performed at the Clearing Member and Settlement account level.
- Participants have the following choice for the Default Hold/Release Status setting: Released (default), On-hold. Selection must be performed at the Clearing Member and Settlement account level. Based on this setting, Delivery Instructions will be sent out either as Released or On-hold.
- Settlement Locations offered are Clearstream Banking Frankfurt/T2S, Clearstream Banking Luxembourg, Euroclear Bank, and CBF-i.

¹ The changes mentioned in Chapter 11 1.2 will be effective already on Friday, 21st of October

- Instead of today's Gross Delivery Management on single trades, Members can modify the Hold/Release status on Delivery Instructions at the (I)CSDs. T2S members can use the Partial release at CBF/T2S. The Partial release functionality is offered by CBL and EB as well and it is recommended that the details about the Hold/Release service should be checked at the respective (I)CSDs.
- Eurex Clearing will not offer a routing service for the change of the Hold/Release and the Partial release status of pending Delivery Instructions resulting out of Special repo transactions.
- Coupon payments will be compensated by debiting Repo buyers and crediting Repo sellers based on the in-house Clearstream CA service.
- Eurex Clearing will not reflect updates to Delivery Instructions received from the (I)CSDs due to Hold/Release status changes in the Pending Delivery- and Trade Action Reports respectively.

The following list provides a functional overview of features offered to participants for the GC Pooling market with C7 SCS.

- Mandatory adaptation to ECB rules requires Clearstream to move to one common collateral system such as CmaX, latest with the introduction of the Eurosystem Collateral Management System (ECMS). Clearstream will migrate the GC Pooling Collateral Management service from Xemac to CmaX. The timeline is aligned with the C7 SCS Release 2.0.
- Settlement flow for GC Pooling between Eurex Clearing's C7 SCS and CmaX will be adapted.
- Settlement Date Exposure Netting (SDEN) is a new netting mechanism offered for the GC Pooling market.
- Participants don't have the choice for the Processing Method setting and all trades are considered for Settlement Date Exposure Netting.
- Participants have the following choice for the Netting Method setting: Single Instruction Netting (default), Dual Instruction Netting. Selection must be performed at the Clearing Member and Settlement account level.
- Participants don't have the choice for the Default Hold/Release status setting and exposure adjustment instructions are always sent out as Released.
- The Collateral Management will be supported by the Clearstream Banking Luxembourg's system CmaX. After the migration of the repo market to C7 SCS, Xemac will no longer be available for the GC Pooling Collateral Management. Corporate Actions are handled by the Triparty Collateral Agent. If necessary, either an automatic substitution of allocated securities is performed prior to a mandatory Corporate Action, or securities stay allocated and the proceeds are compensated back to the original collateral provider.
- ECAG collateral processing will also be moved from Xemac to CmaX (see Chapter 11).

Reports

- All C7 SCS Reports will be provided in XML format to the Common Report Engine (CRE). Furthermore, participants can opt for some reports in text version.
- Changes to reports selection for Trading Participants (for both XML and text versions) must be instructed by their respective Clearing Members via a dedicated form.
- All² C7 SCS reports for repo transactions will be provided at the end of each business day. No intra-day Pending Delivery- and Settled Delivery Reports respectively will be offered. However, an intra-day report (delta version) of the Settled Trade Report will be provided.

² With the exception of Repo Trade confirmation and Intra-day Settled Trade Report, that will be offered as an Intra-day report

- Eurex Clearing will not reflect the updates to Delivery Instructions received from the (I)CSD due to Hold/Release status changes in the Pending Delivery Report.

Member Interfaces and Services

- No Routing Service is offered
- Reports are delivered via CRE
- No Member GUI is provided

Additional Technical Connection

- In order to receive the (I)CSD reports and for the usage of the delivery management functionality (e.g., Hold/Release) at the (I)CSDs directly, a connection to the respective (I)CSDs is required.

Migration

The production migration of repo business from the current CCP system to C7 SCS will follow a “Big Bang” approach, where all eligible instruments and members are mandatorily migrated. Any open repo and GC Pooling trades will also be automatically migrated to C7 SCS at once, provided the relevant legal documentation is duly executed and new accounts are set up and enabled for GC Pooling using CmaX in due time.

1.2 Readiness Statement

According to §10 (3) (ii) of the General Terms and Conditions to the Agreement on Technical Connection to the Clearing Electronic Data Processing (EDP) of Eurex Clearing AG, Clearing Members are obliged to provide Eurex Clearing prior to the first use of the service of Eurex Clearing’s C7 SCS with a written statement confirming that (a) the service of Eurex Clearing’s C7 SCS successfully passed internal test procedures based on each members’ own defined test cases, and (b) the participant system and the participant software interact with the service of Eurex Clearing’s C7 SCS without any errors or interruptions (Readiness Statement via online questionnaire).

Participation in the C7 SCS Release 2.0 simulation and testing phase is optional, though highly recommended - especially for report and interface changes. Eurex Clearing will offer test cases to give all participants the opportunity to get familiar with the new clearing service.

2 Functional Scope

2.1 Repo Transaction Lifecycle

From the Eurex Clearing point of view, repo trades comprise of few stages after the successful trade capture via Novation or Open Offer, i.e., front leg settlement, request processing for open repos (e.g., closing request, re-rate request), fixing process for open and variable repos, and term leg settlement. The processing and confirmation of request types during the lifecycle of a repo are operated according to the terms & conditions of the respective trading venues.

Regarding the repo management for outstanding open repos, the following request types are offered by Eurex Clearing:

- Closing request – closing for an open repo trade might be initiated based on a unilateral declaration either by Buyers or Sellers.
- Re-rate request – Buyers and Sellers must bilaterally agree to change the repo rate of an open repo trade.

Additionally, for open-, open-variable-, and variable repos a daily fixing process is applicable to forecast the term leg settlement amounts.

2.2 GC Pooling General Principles

With the Clearstream's Collateral Mobility Project, the Collateral Management for the GC Pooling service will be migrated from Xemac to CmaX. GC Pooling has been re-designed and its general principles are explained in this section.

At a high-level, GC Pooling model is based on the following principles:

- Instead of MT54X Delivery Instructions to CASCADE (CBF), Eurex Clearing will send exposure adjustments (using MT527 messages) in the basket ISIN to CmaX. Based on the exposure adjustment messages, CmaX will perform the collateral allocation and trigger the settlement.
- Real DvP in both Settlement Locations - T2S and Creation replace the current conditional DvP process.
- The Settlement Location is decided based on the combination of Currency and GC Pooling Basket. A given basket can either settle in T2S or in Creation only and a given currency can settle in T2S or Creation only. There is no choice of Settlement Location between T2S and Creation. Clearstream can offer GC Pooling customers with no access to Central bank money (CeBM), commercial money funding with Central bank money transfer.
- Migration from TARGET2 RTGS accounts to T2S Dedicated Cash Accounts for GC Pooling CeBM settlement in EUR.
- Onboarding at CBF is required for all GC Pooling customers.
- Clearstream offers the possibility to source collateral also cross-border for collateral providers from both locations - CBF and CBL.
- Clearstream has already published the Preliminary Release Notes³ to enable customers to be prepared for account set up related changes.

³ Collateral Mobility: Preliminary Release Notes (CBF Legacy): www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/d21029-2716484

Collateral Mobility: Preliminary Release Notes (CBL): www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/a21081-2716288

	Creation		T2S
	T2S GCP Baskets: <ul style="list-style-type: none"> • ECB (Classic) • ECB EXTended • Equity • CTD Germany • CTD France • CTD Italy 	Non T2S GCP Baskets: <ul style="list-style-type: none"> • INT MXQ Intra-day 	T2S GCP Baskets: <ul style="list-style-type: none"> • ECB (Classic) • ECB EXTended • Equity • CTD Germany • CTD France • CTD Italy
T2S Currencies: EUR		X	X
Non-T2S Currencies CHF, GBP, USD	X	X	

Table 1. GC Pooling - Settlement rules

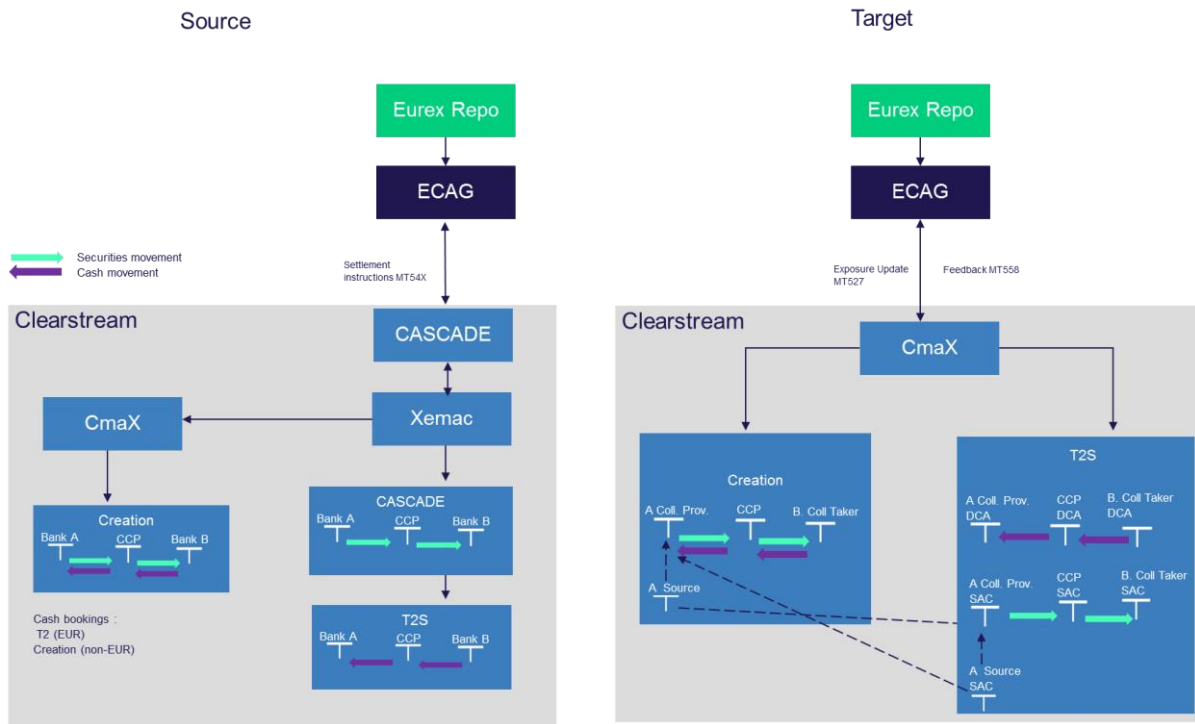


Figure 1. GC Pooling – Source vs Target model

2.3 Participant and Account Structure

As of today, the C7 SCS participant structure will provide financial institutions with the flexibility to concentrate on the functions of one or more of the following domains:

- Trading

- Clearing
- Settlement

In the repo market participants are entitled to execute only proprietary trades. Eurex Clearing AG differentiates between the following areas and participants.

Trading

- Trading Member (TM)

TMs are financial institutions, financial services institutions, and banking organizations, which trade in CCP eligible instruments. TMs are not intended to operate directly with C7 SCS, though can receive reports depending on the permission of their respective Clearing Member. In legal terms, TMs are DC Market Participants.

Clearing

- Clearing Member (CM)

CMs are entitled to perform clearing of trades in CCP-eligible instruments. In addition, CMs are liable for the timely fulfilment of all payment- and delivery obligations resulting from trades.

- Clearing Licenses

Following Clearing Licenses are supported:

- General/Direct Clearing License

Supervised Banks, domiciled in the EU or Switzerland, are typically the holders of the General (GCM) or Direct (DCM) Clearing Licenses. However, also certain types of non-banks may be eligible. They can act as cash providers or cash takers and can access the anonymous order book or novate bilaterally agreed repo trades to the CCP. They need to contribute to the Clearing Default Fund and are obliged to fulfill margin requirements.

- ISA Direct Light License

Holders of the ISA Direct Light License may act as net cash providers for GCMs, DCMs or DC Market Participants in the GC Pooling repo market segment only. For cash provider trades, CCP will only accept bilaterally agreed transactions for clearing (novation), if sufficient pre-funding is available on the front leg settlement date. As all collateral received is automatically pledged back to the CCP, holders of the ISA Direct Light License are not required to contribute to the Default Fund and are not subject to any margin requirements. Holders of the ISA Direct Light License can also act as cash takers, if they remain overall net cash providers to Eurex Clearing at any time. They can “trade out” of an existing exposure with the exact same term leg settlement date. Holders of the ISA Direct Light License are only permitted to clear own trades.

- ISA Direct Clearing Member
-

ISA Direct Clearing Members qualify for clearing of their own trades. ISA Direct Clearing Members (technically set up as TMs) have a direct contractual relationship to Eurex Clearing, i.e., members are creditors and debtors regarding any obligations and claims arising under the clearing agreement. Nevertheless, it is required to sign a trilateral agreement with Clearing Agents, because the latter have to provide certain mandatory services (i.e., Provision of the Default Fund Contribution and Responsibility for the participation in the Default Management Process in proportion of the ISA Direct Clearing Members' cleared business) to ISA Direct Clearing Members. All Clearing Agents need to have the General Clearing Member License for Eurex Repo.

Settlement

- Settlement Institution (SI)

SIs perform securities settlement via accounts at one or several of the supported (I)CSDs. They provide securities services between Eurex Clearing AG and Clearing Members. However, the responsibility towards Eurex Clearing AG to fulfill trades by means of orderly settlement remains with CMs. Settlement Institutions will be able to apply for some reports generated also for their purposes.

Participants perform functions associated with one or more of these areas, given they comply with the associated prerequisites.

The following table provides an overview of available combinations:

Operated Functions	Requirements on TM role not operating clearing	Requirements on CM role	Requirements on SI role
Trading	X		
Trading + Clearing		X ⁴	
Trading + Settlement	X		X
Trading + Clearing + Settlement		X	X
Clearing		X	
Clearing + Settlement		X	X
Settlement			X

Table 2. Participants roles within C7 SCS

⁴ In C7 SCS, the CM role includes the TM role

2.3.1 Settlement Accounts (Special repo)

Settlement accounts are set up in the C7 SCS system for settlement of transactions at the different (I)CSDs and T2S. Settlement accounts can be assigned to participants acting as CMs and/or SIs depending on participants' roles.

The following table shows different possible relations between Settlement accounts and different participants' roles (e.g., CMs can have a relation to one or more TMs, or Settlement accounts have exactly one SI assigned, or Settlement accounts can be assigned to one or more CMs).

have:	CM	TM	SI	Settlement account
CM	---	≥ 1	≥ 1	≥ 1
TM	$\geq 1^5$	---	n/a	$\geq 1^6$
SI	≥ 1	n/a	---	≥ 1
Settlement account	≥ 1	≥ 1	1	$\leq 1^7$

Table 3. Relationships between participants' roles and Settlement accounts within C7 SCS for Special repos

2.3.2 Collateral Accounts (GC Pooling)

Settlement of EUR GC Pooling transactions in T2S GCP Baskets requires following securities accounts in CBF (T2S):

- Collateral Provider account
- Collateral Receiver account

As settlement of the collateral takes place as DvP/RvP instruction in T2S, T2S Securities account and T2S DCA (Dedicated Cash Account) are required. In C7 SCS, only the 7-digit CBF Collateral Receiver account is maintained and provided in C7 SCS reporting.

Settlement of EUR GC Pooling transactions in non-T2S GCP Baskets and non-EUR GC Pooling transactions in all Baskets requires following accounts in CBL (Creation):

- Collateral Provider account
- Collateral Receiver account

As settlement of the collateral takes place as DvP/RvP instruction in Creation, CBL Securities account and the linked CBL cash account are required. In C7 SCS only the CBL Collateral Receiver account is maintained and provided in the C7 SCS reporting.

⁵ For the given Clearing License, TMs can have a relationship to only one CM

⁶ Settlement accounts are not directly assigned to TMs within C7 SCS, but indirectly there is a relation between them via the CM-TM-Settlement account relation. Additionally, from the Trading location point of view, there can be a relation from TMs to Settlement accounts

⁷ Settlement accounts are either used unchanged for Delivery Instructions or are mapped to headquarter accounts in case of branch accounts (same for CBLs SMA and GMA accounts)

Note: The source account linked with the Collateral Provider account must not be at the same location and can either be at CBF (T2S) or CBL (Creation).

2.3.3 Cash Accounts

Cash accounts are set up in the C7 payment system for cash only bookings triggered by C7 SCS in case of coupon-, offset-, and delta payments respectively, correcting the term leg settlement amount. Clearing Members need to provide a Cash account per Settlement account and a supported currency.

- Delta payments (cash adjustments for repo interest amount for variable and open variable repos).
- Coupon payments (Coupon compensation debited from the buyer of the repo and credited to the seller of the repo).
- Offset payments (cash only payments out of the offset block after netting).

2.4 Trading Locations

C7 SCS supports Eurex Repo (MIC: XERE) as a Trading Location. Eurex Repo offers an integrated market for electronic trading for Special repos and GC Pooling trades. As soon as repo trades are concluded on the electronic Eurex Repo trading system, Eurex Clearing steps in as a legal counterparty (CCP) via Open offer.

For GC Pooling Select Invest repos are eligible for clearing via 'Novation' depending on the available pre-funding.

2.5 Product Scope / Eligible Instruments

Special repos

The product scope includes such bonds as European Government Bonds, Jumbo-Pfandbriefe and Pfandbriefe, KfW/Laender Bonds, European Covered Bonds, Agency Bonds and European Corporate Bonds. Eligible list of securities can be found at the location: www.eurex.com/ex-en/markets/eurex-repo/euro-repo-market

GC Pooling

GC Pooling by Eurex Repo GmbH offers different pre-defined baskets for trading. Respective components of each basket can be found at the location: <https://www.eurex.com/ex-en/markets/eurex-repo/gcpooling>

2.6 Settlement Locations

C7 SCS uses the following (I)CSDs for external settlement instructing vs Payments for Special repos:

- CBF – Clearstream Banking Frankfurt
- CBF-i – Clearstream Banking Frankfurt International⁸
- CBL – Clearstream Baking Luxembourg
- EB – Euroclear Bank

C7 SCS uses Clearstream Banking Luxembourg with CmaX as a Collateral Management System for settlement of GC Pooling Repo trades.

⁸ In the C7 SCS reports, the Settlement Location CBF-i is indicated with the code "CBL" for historical reasons

3 Services offered with C7 SCS

Clearing Members will have a default setup covering the basic services provided by C7 SCS. Optional services are to be selected by members. Participants have a choice for Processing-, Netting-, and Default Hold/Release Methods respectively. Selection must be performed at the Clearing Member and Settlement account levels. Services can be set up at the Clearing Member, Settlement account, and Account Usage levels.

3.1 Basic Services (per default, no selection required)

- **Processing Method: Netting**
C7 SCS will offer standard Settlement Date Netting (SDN). All repo trades are to be netted on the day before the Contractual Settlement Date (end-of-day).
- **Netting Method: Single Instruction Netting**
C7 SCS will offer Single Instruction Netting (SIN) as a default netting method
- **Default Hold/Release Status: Released**
Repo trades and their related instructions are set to the status "Released". Delivery Instructions are sent as "Released" to the (I)CSDs.
- **Member Reports in XML format**
Reports are provided to Clearing Members and Settlement Institutions in the XML format.

3.2 Optional Services (explicit selection required)

- **Processing Method: Gross**
As an alternative to Netting, members can choose Gross Processing for repo trades, whereby trades will be sent out Gross as a Delivery Instruction. This option is not applicable for GC Pooling.
- **Netting Method: Dual Instruction Netting**
Members can choose Dual Instruction Netting (DIN) as a netting method for repo trades.
- **Default Hold/Release Method: On-hold**
Members can choose to send Sell Delivery Instructions as "On-hold" to the (I)CSDs. This option is not applicable for GC Pooling.
- **Optional Reports**
Reports in the printable format and reports for Trading Members. Refer to Chapter 9 for details on reports that are available in the printable format.

3.3 Update of Processing Parameters

C7 SCS supports an update of processing parameters – Processing-, Netting-, and Default Hold/Release Methods respectively based on members' request, whereby following points must be considered:

- Updates can be requested as of an effective date in the future.
 - Updates on the Processing Method have no impact on repo trades already accepted by C7 SCS for clearing and will be reflected only for repo trades received on or after the effective date. However, if the Processing Method is updated from Netting to Gross, the default Netting Method (Single Instruction Netting) will be used for repo trades that were already accepted by C7 SCS with the Processing Method as Netting before the effective date of the update, but having the contractual settlement date on or after the effective date of update.
 - The updated Default Hold/Release Method will be considered during the next Delivery Instruction creation on or after the effective date. The updated Netting Method will be considered in the next possible netting run on or after the effective date.
-

3.4 Member Setup Forms for Settlement Account and Processing Parameters

Setup forms will be provided by an email to all clients within the Member Readiness process. The provision of the form will only be required if clients do not agree with the default processing parameters.

They will also be available under the following path:

www.eurex.com/ec-en/ -> Support -> Initiatives & Releases -> C7 SCS Releases 2.0

or please contact your Repo KAM.

Participants can also request different parameters for transactions allowing delivery positions to be tailored for specific member requirements.

Settings are applied to the combination of

- Clearing Member
- Trading location
- Trading Member
- Settlement location
- Settlement account
- Account Usage (DEF – Special repos; GCP – GC Pooling; TIN⁹)

⁹ Account Usage = TIN means that dedicated settings can be set up for transactions in instruments that require a Tax Identification Number (TIN), i.e. Italian bond instruments

4 Settlement Date Netting

Trades which are approaching the contractual settlement date (S-1 onwards) and which are marked for Net Processing, are subject to Settlement Date Netting. These trades are grouped based on the Net Processing Unit. Both front- and term legs respectively are considered together in the settlement date netting. All buy- and sell trades within a Net Processing Unit can be netted against each other. The result of the settlement date netting for a given Net Processing Unit is usually either a Buy surplus or a Sell surplus. Special repo trades are considered only once for the netting and any late Special repo trades are not considered again for netting. Settlement Date Netting is performed on every Eurex Clearing business day at around 18:30 CET, after the trading windows at the connected trading venues have closed.

For Special repos these net obligations are translated into Delivery Instructions after the application of (I)CSD Assignments and shaping processes. Delivery Instructions are transferred to the relevant (I)CSDs in time for the night-time settlement cycle. Once Delivery Instructions are sent out to the (I)CSDs, those instructions will not be cancelled. Therefore, they are not considered again for netting.

For GC Pooling, these net obligations are translated into exposure updates and are transferred to CmaX on the next business day at a pre-defined time. As for GC Pooling, always a net exposure is instructed, any failed trades for previous business days are also considered in the daily netting process. Details for settlement timings of the GC Pooling market segment can be found in Chapter 7.

4.1 Net Processing Unit

Net Processing Units (NPU) define the level at which trades are netted during the Net Processing.

The following attributes of trades define an NPU:

- Clearing Member
- Trading Member
- ISIN (or GC Pooling Basket for GC Pooling)¹⁰
- Settlement currency
- Settlement location
- Settlement account¹¹
- Account type¹²

4.2 Processing Methods

Processing Methods are explained in this section.

4.2.1 Netting as a Processing Method (Default)

When Clearing Members choose to perform Netting, trades belonging to the same NPU are netted together to determine the offset- and the surplus blocks respectively.

¹⁰ Proper new account setup for desired Baskets / Currencies is a pre-requisite for the successful migration

¹¹ For GC Pooling, Collateral Receiver account as received in trade is considered

¹² Account type is to distinguish between proprietary and client business. As for repo clearing, only proprietary business is allowed (this is mentioned only for completeness purposes)

Before Special repo trades are grouped in offsetting block and in surplus block, trades on buy side and sell side are ordered based on their purchase security price. In case of a sell trade, the trade with the lowest purchase security price receives the highest priority and in case of a buy trade, the trade with the highest purchase security price receives the highest priority for assignment to the offsetting block. If more than one trade according to the purchase security price criteria can be potentially assigned to the offsetting block, then the smallest Internal Trade ID¹³ receives the highest priority.

Before GC Pooling trades are grouped in offsetting block and in surplus block, trades on buy side and sell side are ordered based on their contractual settlement date. Trades with the smallest contractual settlement date have the highest priority to be assigned to the offsetting block. If more than one trade according to the contractual settlement date criteria can be potentially assigned to the offsetting block, then the smallest Internal Trade ID¹³ receives the highest priority.

4.2.2 Gross as a Processing Method

In case of Clearing Members' account-level choice is "Gross", no Netting is performed at all, and trades are instructed at the Gross level.

This is not applicable for GC Pooling trades.

4.3 Netting Methods

If the Processing Method is selected as "Netting" (default), then Clearing Members have the following options for Netting Methods:

- Single Instruction Netting (default)
- Dual Instruction Netting

4.3.1 Single Instruction Netting (Default)

The cash only obligations out of the offset blocks are included in the DvP/RvP Delivery Instructions or in the exposure adjustments from the surpluses and are not instructed separately.

Possible netting outcomes are handled as follows:

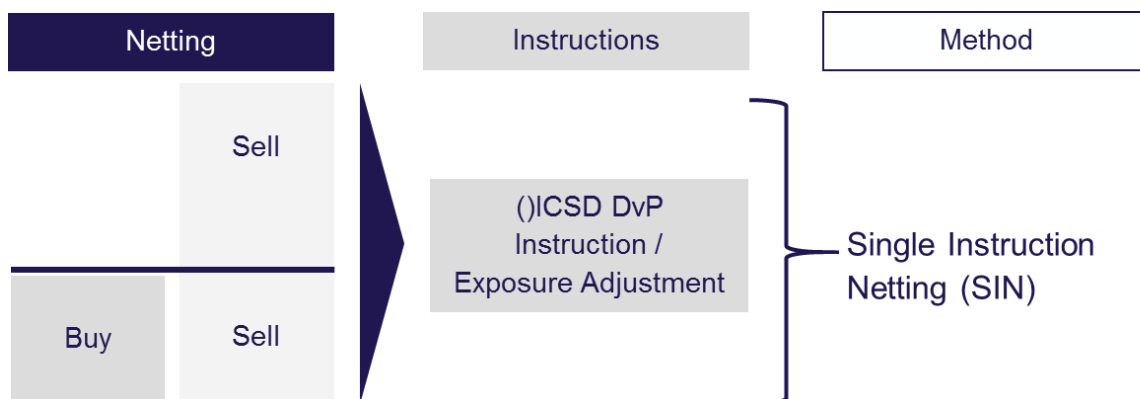


Figure 2. Single Instruction Netting Method (Example with a Sell Surplus)

¹³ Internal Trade ID is not reported in any C7 SCS reports and is defined as a number that increments sequentially by 1

Result of Netting	Special Repo	GC Pooling
Securities and Cash in Opposite Direction	DvP/RvP Instruction	Exposure Adjustment
Flat position without cash	No Instruction	No Exposure Adjustment
Flat position with cash	Cash only Instruction ¹⁴	Exposure Adjustment
Securities only (i.e., no cash)	Aggregation ¹⁵	Exposure Adjustment
Securities and Cash in the Same Direction	Aggregation	Exposure Adjustment
Surplus quantity does not conform with MSU/SUM	Aggregation	Not Applicable

Table 4. Single Instruction Netting - Scenarios

4.3.2 Dual Instruction Netting

The cash only obligations out of the offset blocks are processed separately as the cash only payments by C7 SCS. They are not included in the DvP/ RvP Delivery Instructions or the exposure adjustments from the surpluses.

Dual Instruction Netting typically results in two instructions:

- Delivery Instructions to the (I)CSDs or exposure adjustments out of the surpluses.
- Cash only instructions for the cash differences resulting from the offset blocks.

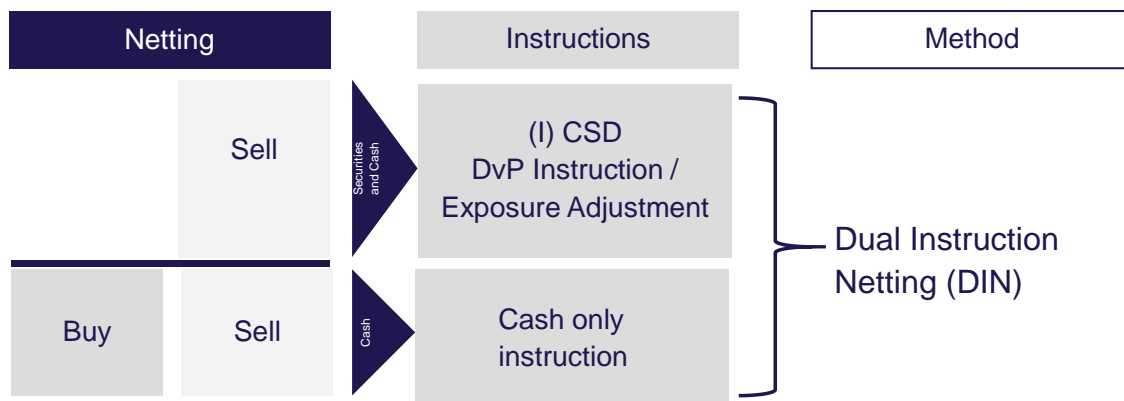


Figure 3. Dual Instruction Netting Method (Example with a Sell Surplus)

Possible netting outcomes from the surplus block are handled as follows:

¹⁴ Cash transactions via the C7 payment system, see Chapter 5.6 Cash Bookings

¹⁵ Aggregation here means that all sell trades will be aggregated together into a DvP and all Buy trades will be aggregated into a RvP separately

Result of Netting	Special repo	GC Pooling
Securities and Cash in Opposite Direction	DvP/RvP Instruction	Exposure Adjustment
No surplus	No Instruction	No Exposure Adjustment
Surplus quantity does not conform with MSU/SUM	Aggregation	Not Applicable

Table 5. Dual Instruction Netting (Surplus block) – Scenarios

Possible outcomes from the offset block are handled as follows:

Result of Netting	Special repo	GC Pooling
With Cash	Cash only instruction	Cash only instruction
Without Cash	No cash only instruction	No cash only instruction

Table 6. Dual instruction Netting (Offset block) - Scenarios

5 Delivery Management (Special repo only)

The Delivery Management processing described in this chapter is applicable only for Special repo. To allow Eurex Clearing to instruct on behalf of Clearing Members, Eurex Clearing requires respective Clearing Members or Settlement Institutions to give a Power of Attorney (PoA) to Eurex Clearing for their (I)CSD / T2S settlement- and cash accounts respectively.

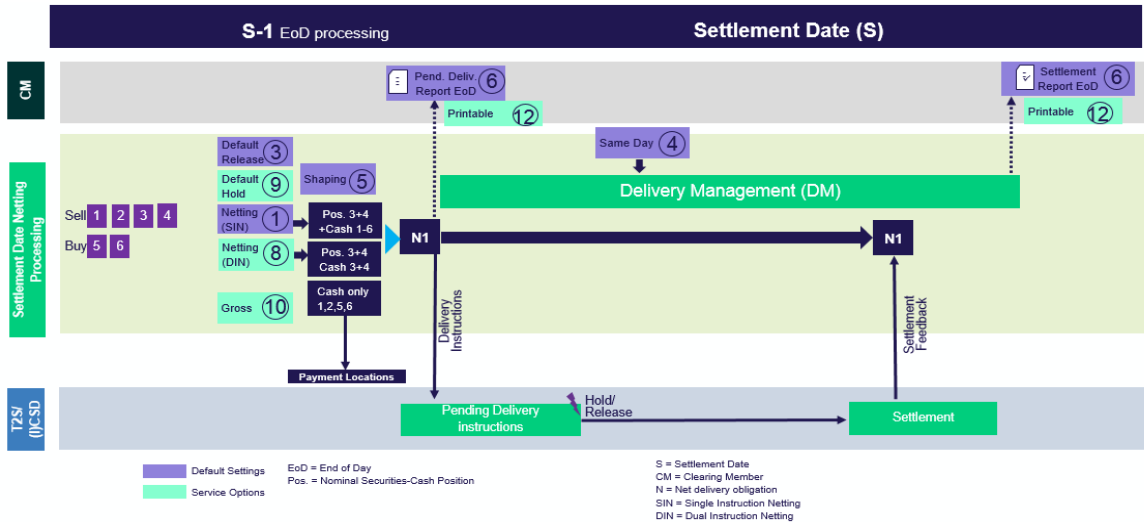


Figure 4. Special repo business flow

5.1 (I)CSD Assignment

(I)CSD Assignment is used to minimize cross-border deliveries for Special repos. (I)CSD Assignment is performed once per settlement day after the Settlement Date Netting. Trades marked for Gross processing are also considered in this process. To achieve this, C7 SCS calculates all Delivery Instructions per (I)CSD on the buy- and sell side respectively each evening after the Settlement Date Netting and allocates buy and sell surplus Delivery Instructions per ISIN of all members. Thus, possible Delivery Instructions will be offset and settled within the same (I)CSD. Only the (I)CSD surplus (one or more Delivery Instructions) remains in scope for cross-border settlement. If the (I)CSDs have a surplus, that surplus will be transferred to the (I)CSDs with a deficit (cross border instruction)

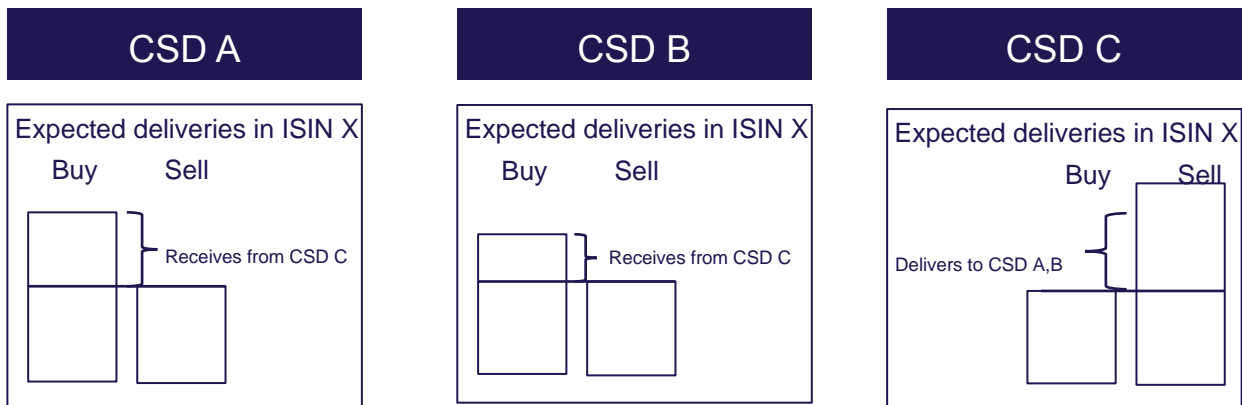


Figure 5 (I)CSD Assignment

5.2 Shaping

To reduce the risk of delivery failure for Special repos, Delivery Instructions with high notional values are shaped into several instructions with smaller notional values. Hence, Delivery Instructions are shaped before being sent to the (I)CSDs. The shaping sizes are maintained at the currency level by Eurex Clearing. The shaping sizes for Special repos are currently set to a nominal amount of 50,000,000 for both eligible currencies such as EUR and GBP.

5.3 Creation of Delivery Instructions

C7 SCS generates Delivery Instructions for repo trades after netting¹⁶, (I)CSD assignment and shaping have been performed.

Front legs of the same day trades (i.e., trades with the trade date same as contractual settlement date) are instructed on the Gross basis and in real-time.

Depending on the member account setup, Delivery Instructions will be sent by C7 SCS for settlement either in status "Released" (buy/sell) or in status "On-hold" (sell only) to the (I)CSDs. Release of those Delivery Instructions have to be done directly at the (I)CSDs by participants.

All Delivery Instructions are sent as either:

- Already Matched (ALM) instruction to the (I)CSDs, if this is supported by the (I)CSDs. In this case, no matching of own and customer leg is necessary on the (I)CSDs side.
- Delivery Instructions (own and customer leg, to be matched at the (I)CSDs, if the ALM functionality is not available at the (I)CSDs.

Participants can find a link to underlying Special repo trades behind a Delivery ID/Delivery Reference in the Pending Delivery Report (CE860).

Delivery Instructions will remain at the (I)CSDs and will not be cancelled by Eurex Clearing at the end of each settlement day (as done in the current CCP system processing). Delivery Instructions remain in the settlement layer until settlements are processed successfully or until Clearing Operations starts the Buy-in/Cash Settlement and therefore cancels these instructions. Cancellation by ECAG will only be done in emergency cases.

C7 SCS sends all Delivery Instructions with Partial Settlement Allowed Indicator as "TRUE" to allow partial settlement at the (I)CSDs as far as supported by these.

Delivery Instructions sent out by C7 SCS for (I)CSD settlements at CBF-i/CBL or Euroclear will be eligible for settlements during mandatory settlement period only.

5.4 Hold/Release (Full/Partial) of Delivery Instructions

Hold/Release status

A default setting for the initial status of newly created Delivery Instructions is derived from members' account setup. The Sell Delivery Instructions are then created and sent out to the (I)CSDs in either "Released" or "On-hold" status based on the setting of this flag. The Buy Delivery Instructions are always sent to the (I)CSDs as "Released".

Change of Hold/Release status

¹⁶ With Processing Method as Netting

Clearing Members can change the status of their leg of pending Delivery Instructions from “On-hold” to “Released” only directly in the system of the respective (I)CSDs.

Full/Partial release

Clearing Members are not limited to release the full quantity of Delivery Instructions at the (I)CSDs. Directly at the (I)CSDs participants can specify a partial quantity of the instruction to be released, if this is supported by the (I)CSDs. Currently, CBF/T2S, CBL and EB support this functionality. It is recommended that the details about the Hold/Release service should be checked at the respective (I)CSDs.

Settlement can only take place based on the released part of the instruction quantity.

5.5 Settlement

The (I)CSDs perform settlement of Delivery Instructions considering the available holdings in Settlement accounts, available cash, the Hold/Release status of Delivery Instructions and the (I)CSD-specific settlement prioritization and optimization rules.

After settlements take place at the (I)CSDs, settlement confirmation messages are sent to C7 SCS and to participants by the (I)CSDs. Settlement confirmations indicate that securities and cash have been successfully moved between Settlement accounts mentioned in the Delivery Instructions.

C7 SCS matches the incoming settlement confirmations with the original Delivery Instructions sent. The corresponding instruction is identified based on the unique ‘Delivery ID’. Both the Delivery Instruction and the underlying trades are updated in C7 SCS as per settled quantity.

Participants are informed about the settlement status of their Delivery Instructions:

- Intra-day via (I)CSDs’ settlement reporting for their Settlement accounts.
Settlement confirmations are sent by the (I)CSDs real/near-time to Settlement account owners and to C7 SCS. C7 SCS will update the status of Delivery Instructions based on these confirmation messages.
- At the end-of-day via Eurex Clearing’s C7 SCS Settled Delivery Report.
Eurex Clearing will inform participants on the updated settlement status with the provision of the Settled Delivery Report, which is the end-of-day report of the respective value day.

Participants are informed about the settlement status of Repo Trades:

- Intra-day via Eurex Clearing’s C7 SCS Repo Intra-day Settled Trade Report.
Eurex Clearing will inform participants on the updated settlement status of Repo Trades with the provision of the Intra-day Settled Trade Report. This report contains partial or full settlement of Repo Trades (Special Repo and GC Pooling) with the Actual settlement date equal to the current C7 SCS business day. This report is a delta report.

5.5.1 Partial Settlement

The (I)CSDs can, where supported by them, provide settlement confirmations for the quantity less than the instructed quantity. This indicates a partial settlement at the (I)CSDs.

Pending quantity and Pending amount in Delivery Instructions will be updated based on the quantity and the amount received in the confirmation feedback. Pending quantities in trades that are part of Delivery Instructions are also updated based on the information received in the confirmation feedback and pending amounts in trades are updated on the pro-rata basis. As there can be multiple trades that are part of Delivery Instructions, trades are selected based on the Unique Transaction Identifier (UTI).

Updated pending quantities/amounts (after partial settlements) will be reflected in the Pending Delivery Report. Settled portions will be reported in the Settled Delivery Report and in the Intra-day Settled Trade Report. Eurex Clearing will send out Delivery Instructions always with a partial settlement indicator allowing partial settlement where this is supported at the (I)CSDs.

5.5.2 Late Delivery Handling

In case Delivery Instructions at the (I)CSDs cannot be fully settled due to the release status “On-hold”, lack of securities or cash, the (I)CSD settlement process will decide on the (I)CSD specific settlement priority. C7 SCS has no influence on which Clearing Member’s instruction will be settled first. The (I)CSDs will follow their standard settlement priority rules for the C7 SCS Delivery Instruction. The Delivery Instructions, that are not settled, are forwarded to the next settlement run at the (I)CSDs (settlement cycle or real-time processing).

Feedback on the settlement status of Delivery Instructions is provided at the end-of-day by C7 SCS in the Settled Delivery as well as Pending Delivery Report respectively.

With the introduction of the Central Security Deposit Regulation (CSDR) and the Settlement Discipline Regime (SDR), the (I)CSDs must calculate the penalties for late matching and late settlement, and Eurex Clearing must perform booking of penalties.¹⁷

5.5.3 Buy-in Processing

Eurex Clearing is entitled, or on request of Clearing Members, to perform Buy-in attempts according to the Buy-in schedule applicable as from the fifth day following the delivery date of the term leg. C7 SCS will be utilizing the Buy-in Agent (Eurex Securities Transactions Services GmbH) services to handle the Buy-in processing, where failed delivery of original sellers to buyer requests a substitute purchase from a third party. The failing party must reimburse all costs associated with the Buy-in (difference between the original price and the Buy-in price as well as fees).

5.5.4 Reporting of Settlement Status

In general, Repo trades are reported as “Settled” in the Settled Delivery Report and in the Intra-day Settled Trade Report, after the following conditions are fulfilled:

- Contractual settlement day is reached
- Securities have settled
- Cash is paid¹⁸

For all standard cases with DvP/RvP Delivery Instructions, the above conditions are fulfilled after the related settlement confirmation message is received from the (I)CSDs.

¹⁷ www.eurex.com/resource/blob/2757292/c11b8067bcf8e0bc51e2627f2405a680/data/ECAG-CSDR-Release-Notes.pdf

¹⁸ In case Offset cash is instructed as “Cash only”, it is reported as “Settled”, where value date is reached and cash payment is due

5.6 Cash Bookings

Cash payments related to Eurex Clearing, securities clearing will be processed as follows:

- Cash resulting from the Delivery Instructions (DvP and RvP payments) is booked by the (I)CSDs on cash accounts linked to Settlement accounts (as today).
- Corporate Actions income payments are booked either automatically by Eurex Clearing or by CBF (as today).
- Cash Bookings such as Buy-in settlements and Cash Settlement will be booked manually by Eurex Clearing Operations (as today).
- Cash only bookings outside C7 SCS for fees are booked on respective cash accounts (as today).
- Cash only bookings that are booked by Eurex Clearing from income payments, offset block and delta payments, correcting the term leg settlement amount, are booked on cash accounts per Settlement accounts, per currency provided by Clearing Members (as today).

6 Exposure Management

Exposure Management processing described in this chapter is applicable only for GC Pooling repos.

To allow Clearstream to instruct on behalf of Clearing Members for GC Pooling, Clearstream requires respective Clearing Members or Settlement Institutions to give a Power of Attorney (PoA) to Clearstream for their (I)CSD/T2S account owners and cash accounts.

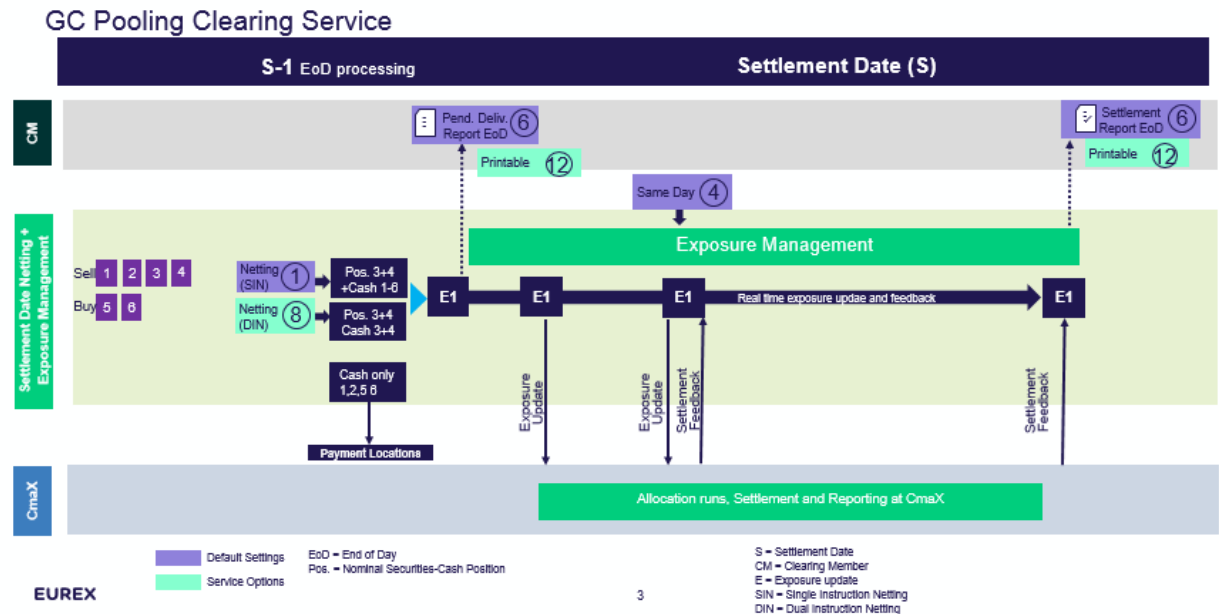


Figure 6. GC Pooling Business flow

6.1 Contract Identification in CmaX

A Contract is identified within CmaX by unique combination of the following:

- Collateral provider identifier
- Collateral receiver identifier
- Collateral receiver account
- Basket

Contract is created within CmaX as a part of an initial setup when new GC Pooling participants are onboarded, or new Baskets are added for existing participants. Eurex Clearing is always the counterparty in each contract.

Within a Contract, an Exposure is set up per each currency for which participants are onboarded for a given GC Pooling Basket.

6.2 Creation of Exposure Adjustments

Based on the netting result and the netting method, C7 SCS determines the net exposure and generates the exposure adjustment using the MT527 messages. C7 SCS sends further exposure adjustments only after the previous exposure adjustment has been accepted by CmaX for a given exposure.

6.2.1 Early Settlement Trades

Front legs of early settlement trades are instructed for settlement earlier than standard trades (e.g., at 07:00 CET for EUR only).

6.2.2 Same Day Trades

Trades with the trade date the same as the contractual settlement date are referred to as the same day trades (front legs of overnight trades). After the same day trades have been successfully validated, the nominal amount from trades is used to calculate the updated exposure and the exposure adjustment is instructed on the real-time basis.

6.2.3 Standard Trades

The exposure adjustments due to standard trades (term legs of the same day trades, non-same day trades) are sent at pre-defined times during the day when the liquidity is available in the market as provided in Chapter 7.2.

The exposure adjustment due to any failed trades from the previous business day(s) is instructed separately and before the standard trades.

6.3 Processing of Exposure Adjustments in CmaX

The future model will be based on DvPs, i.e., simultaneous movements of cash and securities. Eurex Clearing will instruct exposure adjustments for which individual securities are selected by the collateral management system, resulting in one to several DvP/RvP instructions for the settlement system. Each instruction will settle “all or nothing”, and the end-of-day process will realign the exposure in case of undelivered principal.

CmaX processes the exposure adjustments in sequential manner and processes the next exposure adjustment only after the previous requested exposure updates have been fully covered by CmaX. CmaX will put further exposure adjustments from Eurex Clearing On-hold.

As of today, term leg settlement amounts with respect to GC Pooling trades should be managed within the collateral management system. Cash amounts, that are not part of the initial exposure, can result from the Repo Interest Amount in the term leg settlement amount. Processing of Cash amounts, that are not part of the initial exposure, will be instructed as a separate cash only instruction (‘payment free of delivery/receipt – PFOD/PFOR’ on T2S or related cash instruction type 9X within Creation).

6.4 Reporting in CmaX

Current Xemac reports will be replaced by standard CmaX reports. A re-mapping of the information between these reports and customers’ systems will need to be performed. More detailed granular mapping has been provided by Clearstream in the “Collateral Mobility – Detailed Release Notes” and can be accessed using following links:

For CBF: <https://www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/d21053-2869830>

For CBL: <https://www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/a21128-2869604>

The description of the available reports in CmaX can be found in the [CmaX Connectivity Guide](#)

6.5 Settlement

The Collateral Management system (CmaX) performs collateral allocations to cover the requested exposure amount. The covered exposure amount is communicated to C7 SCS with MT558 (Triparty Collateral Status and Processing Advice) messages. In case of full settlements, all of the GC Pooling trades, that were part of the given exposure adjustment, are marked as settled.

6.5.1 Partial Settlement

As there can be multiple trades, that are part of the exposure adjustment, following priority rules within the exposure adjustment to settle trades in case of a partial settlement is:

- Oldest Contractual Settlement Date
- Unique Transaction Identifier (UTI)

The updated pending quantity/amount (after partial settlement) will be reflected in the Pending Delivery Report. Settled portion will be reported in the Settled Delivery Report and in the Intra-day Settled Trade Report.

6.5.2 Reporting of Settlement Status

In general, GC Pooling trades are reported as “Settled” in the Settled Delivery Report and in the Intra-day Settled Trade Report after the following conditions are fulfilled:

- Contractual settlement day is reached
- Securities have settled
- Cash is paid¹⁹

In all cases where the exposure adjustment is sent, the above conditions are fulfilled after the related settlement confirmation message is received from the Collateral Management System (CmaX).

6.6 Cash Bookings

Cash payments related to Eurex Clearing securities clearing will be processed as follows:

- Nominal amounts in GC Pooling trades are booked by the Collateral Management System (CmaX) against the allocated collateral (as DvP/RvP) on cash accounts linked to Settlement accounts.
- Cash amounts that are not part of the initial exposure will be processed as separate cash only instructions by the Collateral Management System (CmaX).
- Corporate Actions income payments (in case automatic substitution is not required) are booked by the Asset Servicing System of Clearstream in collaboration with the Collateral Management System CmaX (as today).
- Cash only bookings outside C7 SCS for fees are booked on respective cash accounts (as today).
- Cash only bookings that are booked by Eurex Clearing using C7 Cash Payment Services from the offset block and the delta payments correcting the term leg settlement amount are booked on cash accounts per Settlement accounts, per currency provided by Clearing Members (as today).

¹⁹ In case Offset cash is instructed as “Cash only”, it is reported as “Settled”, where value date is reached and cash payment is due

7 Trading and Settlement timelines

This chapter summarizes the trading timing and settlement timing for Special repo and GC Pooling market segments.

There are no planned changes in these trading and settlement timings respectively with the migration and are provided in this document for completeness purposes.

7.1 Special Repo

Details with regards to trading timings and the settlement timings Special repo trades have been summarized as below:

Trade type	Currency	Trading			Settlement			
		Non-Overnight Terms	Overnight/ Same-day (Internal)	Overnight/ Same-day (External)	Internal		External	
					Non-Overnight	Overnight	Non-Overnight	Overnight
Special/GC	EUR	7:30-18:00	7:30-15:15	7:30-14:45	21:00*-16:00	7:30-16:00	21:00*-15:30	7:30-15:30
	GBP	7:30-18:00	7:30-15:15	7:30-14:45	21:00*-16:00	7:30-16:00	21:00*-15:30	7:30-15:30

* Settlement starts S-1 onwards

Table 7. Repo market (Special/GC) segment trading and settlement timelines summer (CEST) and wintertime (CET)

Definition of Internal is as follow:

- CBF(T2S) Internal, CBL Internal, EB Internal
- CBF(T2S) - CBL cross-border
- CBF(T2S) - EB cross-border

Definition of External is as follows:

- Bridge Settlement (CBL - EB)

7.2 GC Pooling

Details with regards to trading and settlement timings respectively for GC Pooling trades have been summarized as below:

Trade type	Currency	Trading						Settlement					
		Non-Overnight Terms		Overnight / Same -day		Overnight / Same -day (Select Invest)		Non-Overnight Terms – Front & Term legs, Overnight/Same-day Terms – Term legs			Overnight/Same-day-Settlement Terms – Front legs		
		Start	End	Start	End	Start	End	Start	End	Target	Start	End	Target
GC Pooling	EUR	07:30	18:00	07:30	17:00	07:30	14:00	10:00	17:30	10:45	07:30	17:30	30 min after trade conclusion

Trade type	Currency	Trading						Settlement					
		Non-Overnight Terms		Overnight / Same -day		Overnight / Same -day (Select Invest)		Non-Overnight Terms – Front & Term legs, Overnight/Same-day Terms – Term legs			Overnight/Same-day-Settlement Terms – Front legs		
		Start	End	Start	End	Start	End	Start	End	Target	Start	End	Target
	USD	07:30	18:00	07:30	15:30	07:30	15:30	14:30	17:30	15:00	14:30	17:30	15:00, or 30 min after trade conclusion, if traded after 14:30
	CHF	07:30	18:00	07:30	13:00	07:30	13:00	07:00	15:00	13:45	07:30	15:00	30 min after trade conclusion
	GBP	07:30	18:00	07:30	16:30	07:30	16:30	07:00	17:30	11:30	07:30	17:30	30 min after trade conclusion
Early Morning Trades	EUR	07:30	18:00	-	-			07:00	17:30	07:30	-	-	-

Table 8. Trade and settlement timing for GC Pooling trades

8 Corporate Action Processing

The processing of Corporate Actions for the repo market segment trades is performed by Eurex Clearing and for the GC Pooling market segment trades by Clearstream Banking within the collateral management application landscape.

8.1 Repo Market Segment

Sellers of repo remain the beneficial owners of bonds and are entitled to receive Corporate Action benefits in form of Coupon compensations. The (I)CSDs credits Corporate Action benefits to holders of securities. It is the obligation of buyers of repo to pass on the Corporate Action benefits to sellers of repo during the its lifecycle. As CCP is the counterparty to buyers and to sellers of repo, it debits the Coupon compensation from buyers of the repo and passes them to sellers of the repo.

Coupon compensation for repos occurs when:

- The actual settlement date of a front (opening) leg is before or equal (\leq) to the record date of the underlying bond (front leg is settled) and the contractual settlement date of the term (closing) leg is after ($>$) the record date of the underlying bond, or
- The contractual settlement date of a term leg is before or equal (\leq) the record date and the term leg is still not settled (late term leg; actual settlement date is after ($>$) record date)

Coupon compensation payments are set up as cash only payments.

8.2 GC Pooling Market Segment

For the GC Pooling market segment, Clearstream automatically performs one of the following actions for mandatory Corporate Actions:

- Substitutes allocated securities prior to a mandatory Corporate Action or a taxable income event, or
- Performs compensation on behalf of Eurex Clearing in case no sufficient collateral for substitution is available

For voluntary Corporate Actions, repo sellers can always substitute the respective security to take part in offers.

9 Reporting

The C7 SCS reports for repo and GC Pooling will be generated typically at the end-of-day and distributed through the Common Report Engine (CRE). General rules for the report distribution will not change. The XML reports will be provided to Clearing Members and Settlement Institutions by default. Reports in printable text are optional. Clearing Members can request reports in XML and in the text format for their Trading Members. The report ordering form will be available via:

<https://www.eurex.com/ec-en/find/forms>.

A full description of reports will be provided in due time via www.eurex.com/ec-en/ -> Support -> Initiatives & Releases -> C7 SCS Releases -> C7 SCS Release 2.0 -> System Documentation -> Reports.

Common Report Engine is provided via www.eurex.com/ec-en/ -> Support -> Technology -> Common Report Engine.

C7 SCS Report ID	Report Name	Delivery Time	RAW (XML) Format	Printable Format	Current CCP Reports	Description
TC800/ TC801/ TC802	Repo Trade Confirmation Report	Intra-day ²⁰	Yes	No	TC100/ TC101/ TC102	This report confirms new trade to members once repo trade is accepted and successfully validated by C7 SCS
TC850/ TC851/ TC852	Repo Contracts Report	EoD T(+x)	Yes	No	TC750/ TC751/ TC752	The report contains details on repo trades
CE860/ CE861/ CE862	Pending Delivery Report	EoD, S - 1(+x)	Yes	Yes	CE260/ CE261/ CE262	On one business day before value date, delivers the netting results indicating if trades are in offset or in surplus Value date onwards, trades that are still pending, are delivered
CE870/ CE871/ CE872	Settled Delivery Report	EoD, S+1(x)	Yes	Yes	CE270/ CE271/ CE272	Trades that have settled on a given settlement date
CB830/ CB831	Trade Action Report	EoD, T(+x)	Yes	Yes	CB230/ CB231	Manually inserted, deleted, Buy-in Blocked/Released Status Update transactions

²⁰ This report is created on an hourly basis. During the peak trading hours (from 08:00 CET to 13:00 CET) it is created every 30 minutes

C7 SCS Report ID	Report Name	Delivery Time	RAW (XML) Format	Printable Format	Current CCP Reports	Description
CD850/ CD851/	Settled Cash Transactions Report	Settled Cash Transactions Report	Yes	Yes	CD250/ CD251/	Cash Transactions sent to corresponding Payment Banks and considered as settled
CD852 ²¹	Repo Settled Cash Transactions Report	EoD, S	Yes	Yes	CD250/ CD251/ CD252	Cash Transactions (related to repo trades) sent to corresponding Payment Banks and considered as settled
CA870/ CA871	Repo Custody Payment Statement Report	EoD, S(+x)	Yes	No	CA160/ CA161	The report shows Coupon compensations for Special repos
CI870/ CI871/ CI872	Repo Intra-day Settled Trade Report	Intra-day ²²	Yes	No	N/A	Trade level information of Repo Trades that are settled on the current business day

Table 9. Available Reports

Please note that all the changes before the migration date will be reported in the CCP reports. After the migration date, the repo related information will be distributed only in the C7 SCS reports. To avoid unwanted reporting fees, customers are advised to evaluate the reports (Print reports and Trading Member reports) from the CCP system that are not required by them from November 2022 onwards and cancel subscriptions accordingly. No fee for Repo specific Print reports from the CCP system will be charged from November 2022 onwards. For any other report, that is not required by customers, the subscription must be cancelled actively.

Pending Delivery Report (CE86X), Settled Delivery Report (CE87X) and Settled Cash Transactions Report (CD85X) are common for both cash- and repo markets.

Clearing Data Control is responsible for report ordering form.

9.1 Referencing between C7 SCS Reports and sent Delivery Instructions to (I)CSDs

The structure of the referencing is based on the reports that are provided by C7 SCS and the MT54X messages that are provided by the (I)CSDs and which are based on the ISO15022 standard message format.

Reference information will be provided in the following C7 SCS reports:

²¹ CD852 report is foreseen only for ISA Direct Clearing Members and reports only repo related transactions

²² This report is created multiple times from 7.00 until 19.00 CE(S)T every 1 hour

- Pending Delivery Report CE860/861/862
- Settled Delivery Report CE870/871/872

C7 SCS sends Delivery Instructions in SWIFT ISO 15022 format to the (I)CSDs for each Net Delivery Obligation and sends among other fields the following identifiers in the Delivery Instruction message:

SWIFT Tag	CBF/T2S	CBF-I/CBL	EB
20C::SEME//	Delivery Reference RAM2709M12345678	Delivery Reference RPA2709D12345678	Delivery Reference RPA2709D12345678
20C::TRRF//		NPU ID for net trades External trade number (7 digits) concatenated with original trade date as in trade book (8 digits), separated by "/" for Gross trades	NPU ID for net trades External trade number (7 digits) concatenated with original trade date as in trade book (8 digits), separated by "/" for Gross trades
70E::SPRO//	<ul style="list-style-type: none"> • If only External Trade Number is available External trade number (7 digits) concatenated with original trade date as in trade book (8 digits), separated by "/" for Gross trades: Example: 1234567/20160426 NPU ID for Net trade deliveries: NPU ID: Example: 4502920110299394 <ul style="list-style-type: none"> • If both External Trade Number and Tax Identification Number are available: /TAX/Tax Identification Number //SFR/TradeNumber Example: /TAX/ABCDEFGHIJKLMNPOQ//SFR/1231235/20160426		
20C::COMM//	Common Reference 2709X12345678	Common Reference 2709X12345678	Common Reference 2709X12345678

Table 10. Examples for References sent in Delivery Instruction messages by C7 SCS to the (I)CSDs

Please note that members will not receive a copy of these Delivery Instruction messages.

Members receive the (I)CSD settlement information related to Delivery Instructions that they subscribe to. The following MT5XX messages are provided during the communication with the (I)CSDs and can be used for the referencing:

- MT54X: Settlement Confirmation
 - From the (I)CSD to Settlement account holder and ECAG.
- MT548: Settlement Status and Processing Advice & Cancellation Confirmation
 - From the (I)CSD to Settlement account holder and ECAG.

Referencing can be done based on the following attributes which are included in the C7 SCS reports and SWIFT MTXXX messages provided by the (I)CSDs:

- Delivery ID
 - Reported as dlVID in Pending Delivery- and Settled Delivery Reports.
 - Builds last 8 digit of Delivery Reference in instructions sent by C7 SCS.
- Delivery Reference
 - Reported as dlVRef in Pending Delivery Report and Settled Delivery Report for Special repo, Not sent for GC Pooling repos.
 - Sent as Instruction Reference in field 20C::SEME towards (I)CSDs.
 - Used as Auftragsreferenz/Actor Reference by CBF/T2S.
 - To be used for delivery management via MT530 at CBF-i/CBL and via MT530 at CBF in ICP mode.
- External Trade Number
 - Reported as trdNum in Pending Delivery Report and Settled Delivery Report.
 - Only for Gross Trades.
 - Sent in free text field 70E::SPRO towards CBF.
 - Sent in field 20C::TRRF towards CBF-i/CBL and EB.
- Net Processing Unit ID
 - Reported as rpoTrdTyp in Pending Delivery Report.
 - Only for Net Trades.
 - Sent in free text field 70E::SPRO towards CBF.
 - Sent in field 20C::TRRF towards CBF-i/CBL and EB.
- CASCADE reference
 - Provided by CBF in field 20C::TRRF.
 - To be used for delivery management at CBF via MT530 in ICP mode.
- T2S reference (MITI)
 - Provided by T2S.
 - To be used for delivery management at CBF/T2S in DCP mode.

Note: For more details on the referencing please compare and align the detailed description of the “Eurex Clearing - C7 SCS XML Reports - Reference Manual”. For more details on the (I)CSD messages and reporting please refer to the documentation of the (I)CSDs.

9.2 Identification of Settlement Reporting related to Special repos in C7 SCS

Members can use the first 3 characters of the Delivery Reference (prefix) from the settlement reporting sent out by the (I)CSDs, such as:

- Settlement Status Messages MT548
- Settlement Confirmation Message MT544-MT547

to identify if related transactions are related to Special repos in C7 SCS.

Securities CCP uses the prefixes “ALM” and “POA” for Delivery References in Delivery Instructions (field 20C::SEME) towards the (I)CSDs. C7 SCS uses the prefixes “SAM” and “SPA”, respectively for Delivery Instructions out of the cash market and Eurex. C7 SCS uses the prefixes “RAM” and “RPA”, respectively for Delivery Instructions for Special repos. C7 SCS uses the prefix “RAM” for already matched instruction at CBF and the prefix “RPA” is used for unmatched instructions.

9.3 CBF Service Offering for Message Type “MT530 Transaction Processing Command” in the Context of C7 SCS

The modification for “already matched” settlement instructions at CBF can be provided by either:

- Using the CASCADE instruction number (“KP reference”) to uniquely identify the dedicated leg, i.e., the Delivery or Receive instruction, that should be subject to modification or
- Using the T2S Actor Reference to refer to an “already matched” settlement instruction and to specify the legs to be modified by an indicator. The T2S Actor Reference corresponds to C7 SCS’s Delivery Reference, e.g., RAM0902M00044003. Refer to CBF Announcement D21021²³ about this service for more information.

For details on the current message layout for sending MT530 message to CBF members should refer to CBF Connectivity Handbook Part 2²⁴.

Derivation of Eurex Clearing BIC

The Eurex Clearing BIC is not reported explicitly in the C7 SCS reports. Customers can derive the Eurex Clearing BIC from the information provided in the Pending Delivery Report (CE860) considering the below mapping:

Based on Pending Delivery Report (CE860/1/2)

Aspect	Settlement Location	Clearing House Settlement Location	Clearing House Settlement Account	BIC Branch Code (Last 3 char-s)	ECAG BIC in Simulation environment	ECAG BIC in Production environment
Field in report	<i>dlvSettlLoc</i>	<i>clgHseSettlLoc</i>	<i>clgHseSettlAccount</i>	N/A	N/A	N/A
Special repo	CBF	CBF	75250000	“XXX”	EUXCDEF0XXX	EUXCDEFFXXX

Table 11. Information on Eurex Clearing BIC based on Pending Delivery Report

²³ www.clearstream.com/clearstream-en/products-and-services/settlement/d21021-2622058

²⁴ www.clearstream.com/resource/blob/1312490/5714beb17a8f505640044414862a6251/cbf-connectivity-handbook-part-2-en-data.pdf

10 Migration Approach

The production migration of repo business from the current CCP system to C7 SCS will follow a “Big Bang” approach, where all eligible instruments and members are mandatorily migrated. After the member data migration has been performed, the following dedicated reports will be provided to members:

- RM400 – Settlement account Assignments with Euroclear Bank Codification
- RM300 – Settlement account Clearing Settings

Members have the possibility to verify their account setup in C7 SCS using these reports.

Any open repo and GC Pooling trades will also be automatically migrated to C7 SCS at once. Further details on the migration procedure can be checked in the [Migration Strategy paper](#)²⁵.

10.1 Special Repo

On Friday, 21st of October 2022, any pending Delivery Instructions will be cancelled by Eurex Clearing at the settlement cut-off deadline. After the clean-up, ASDN will not be performed in the CCP system and Delivery Instructions will not be sent out in the nighttime settlement cycle. Special repo trades continue to be reported in the existing CCP reports till this Friday.

Settlement Date Netting will be performed in C7 SCS after open repo trades are migrated to C7 SCS.

Migration report instance of CE860 (repo only) will be created, in addition to the daily end-of-day CE860 report for FWB/Eurex Derivative, to reflect the netting result and the delivery IDs for trades with contractual settlement date as of Monday, 24th of October. The Migration report instance of CE860 will reflect the late trades and Delivery Instructions created.

Any late trades from the CCP system (with contractual settlement date less than 24th of October) will be treated as Gross trades and instructed Gross to the (I)CSDs. Special repo trades with Single Instruction Netting method, that are part of offset block are considered as pending if the relevant settlement instruction from the Surplus Block has not fully settled. Such trades from the offset block will also be instructed on Gross basis. Thus, it is highly recommended that settlement fails should be avoided by members on Friday, 21st of October 2022.

The Delivery Instructions will be sent out for settlement on Monday, 24th of October 2022. A transaction data migration report will be generated.

As cash deferral functionality is not offered by C7 SCS, closed trades and partially closed trades will be migrated as below:

- Closed Trades from the CCP system will be migrated to C7 SCS as Settled Trades. Such trades will not be reported in Settled Delivery Report (CE870/CE871/CE872) on Monday.
- Partially Closed Trades from the CCP system will be migrated to C7 SCS as Partially Settled Trades. Pending portion of the trade will be reported in the Migration report instance.

Cash only obligation out of the offset block for Dual Instruction Netting during Special Migration Netting run will be instructed intra-day on Monday. Settlements of such cash obligation will be reported in the Settled cash transaction report created as part of the Monday end-of-day reporting.

²⁵ https://www.eurex.com/resource/blob/3164296/63e8902b1af5e7a74db119a87dea5f45/data/C7-SCS-2.0_Migration-Strategy-Paper.pdf

10.2 GC Pooling

As part of the migration approach for GC Pooling, Clearstream plans an automatic transfer of all open GC Pooling Repo exposures and bookings of allocated GC Pooling Repo collateral from the current account structure to the new account structure. The collateral can only be moved on a T2S business day. After the settlement cut-off in the Xemac system, a snapshot of all open exposures will be taken on Thursday, 20th of October 2022, and the collateral will be moved on Friday, 21st of October 2022.

On Thursday, 20th of October 2022, any pending Delivery Instructions will be cancelled by CCP at the preponed settlement cut-off 15:45 CET. Actual Settlement Date Netting will not be performed in the CCP system Thursday onwards. No Delivery Instructions for GC Pooling trades will be sent out by CCP for settlement on Friday, 21st of October 2022. This is achieved by setting the GC Pooling Baskets to the Technical ISIN Block in the CCP system and thus GC Pooling trades will be reported in the existing CCP reports with the Technical ISIN blocked status on Thursday, 20th of October, and Friday, 21st of October.

Settlement Date Exposure Netting will be performed in C7 SCS after open GC Pooling trades are migrated to C7 SCS and the exposure adjustments will be sent out for settlement on Monday, 24th of October 2022.

Open GC Pooling trades will be migrated to C7 SCS with the updated Settlement Location and the Settlement account. The Settlement Location in C7 SCS is updated based on the Basket and the Currency combination as per table below. The Settlement account is always the collateral receiver account setup in CmaX for the relevant Settlement Location.

Basket	Currency	Location
DE000A0AE077 GC Pooling ECB Basket	EUR	CBF
DE000A0AE077 GC Pooling ECB Basket	CHF, USD, GBP	CBL
DE000A0WKKX2 GC Pooling ECB EXTended Basket	EUR	CBF
DE000A0WKKX2 GC Pooling ECB EXTended Basket	CHF, USD, GBP	CBL
DE000A1PHUP5 GC Pooling INT MXQ Basket	EUR, CHF, USD, GBP	CBL
DE000A1EZNP6 GC Pooling Equity Basket	EUR	CBF
DE000A1EZNP6 GC Pooling Equity Basket	CHF, USD, GBP	CBL
DE000A1PHUN0 GC Pooling CTD Germany Basket	EUR	CBF
DE000A2GG7V0 GC Pooling CTD France Basket	EUR	CBF
DE000A2GG7W8 GC Pooling CTD Italy Basket	EUR	CBF

Table 12 Basket and Currency combination

Cash only obligation out of the offset block for Dual Instruction Netting during Special Migration Netting run will be instructed intra-day on Monday. Settlements of such cash obligation will be reported in Settled cash transaction report created as part of Monday end-of-day reporting.

10.2.1 Exceptional Settlement Holiday

Following points must be considered in this regard for the exceptional settlement holiday and changes in settlement and trading timings for GC Pooling Repo Transactions. Further details can be found in the Eurex Clearing Circular 066/21²⁶:

- On Friday, 21st of October 2022, settlement of GC Pooling Repo Transactions with Eurex Clearing will not be available (exceptional settlement holiday), and Eurex Clearing will hence not accept any GC Pooling Repo Transactions with the mentioned date as a contractual settlement date. This condition is applicable for the opening date of the front leg as well as for the closing date of the term leg. Eurex Clearing will also not perform any closing of open term GC Pooling Repo Transactions on this date. Any pending (including late) GC Pooling Repo Transactions will not be instructed on this date and will be instructed as of Monday, 24th of October, following the successful migration. Eurex Clearing will take appropriate measures to enforce this within its own technical systems.
- On Friday, 21st of October 2022, the trading on Eurex Repo can continue uninterrupted, but no trading and settlement of the same day GC Pooling trades will be possible.
- The trading deadline for concluding same day GC Pooling trades in currencies EUR, USD and GBP will be preponed to 15:00 CET on Thursday, 20th of October 2022.

Special repo markets remain unaffected by this exceptional handling.

10.3 Transaction Data Migration Reports

After the successful migration of open repo trade book, C7 SCS will provide the Migration-report instance of the following reports:

- Pending Delivery Report: 21RPTCE860AAACC20220614MIGR.XML_ZIP
 - The report is created using the report name CE860/1/2 with the suffix "MIGR", with the business date as of Friday, 21st of October 2022
 - XML layout of CE860/1/2 is used
 - Only Repo and GC Pooling trades are reported
 - The netting result after the SDN for Special repo trades with contractual settlement date as of Monday, 24st of October 2022 is provided. The delivery IDs for Special repo trades are also provided
 - The netting result after the SDEN for pending GC pooling trades with contractual settlement date as of or before Monday, 24st of October 2022 is provided
- Repo Contracts Report: 21RPTTC850AAACC20220614MIGR.XML_ZIP
 - The report is created using the report name TC850/1/2 with the suffix "MIGR", with business date of Friday, 21st of October 2022
 - XML layout of TC850/1/2 is used
 - All the migrated repo trades are reported
 - GC Pooling trades are reported with the updated Settlement Location as well as Settlement account

These reports will be available in the CCP folder of the Common Reporting Engine (CRE) after the successful migration (latest Monday morning, 24st of October 2022).

²⁶ www.eurex.com/ec-en/find/circulars/clearing-circular-2722536

11 Xemac Decommissioning

The ECB's Governing Council has launched two major projects that seek to harmonize the Eurosystem infrastructure.

- The Eurosystem has started a project to consolidate TARGET2 and TARGET2-Securities in terms of both technical and functional aspects. The new consolidated platform will be launched in November 2022.
- Eurosystem's Advisory Group for Market Infrastructure for Securities and Collateral (AMI-SeCo) announced the Single Collateral Rulebook for Europe (SCoRE), seeking to implement the first wave adoption of standards on triparty collateral management, Corporate Actions, and billing processes.
- The ECB also seeks to launch the Eurosystem Collateral Management System (ECMS) by November 2023.

The implementation of both projects requires a significant amount of development work and change requests to be made to some of the technical processes, including operating procedures and messaging formats (ISO 20022), that underpin the collateral management services offered by Clearstream.

As a strategic decision and to simplify the integration approach with ECMS in 2023, Clearstream plans to decommission the legacy collateral management at CBF, Xemac, and integrate ECMS exclusively with the collateral management system at CBL, Cmax. With this change, Clearstream will use a single collateral management engine to support activities both with the Bundesbank (via CBF) and Banque Centrale de Luxembourg (via LuxCSD) but also the securities collateral provision to Eurex Clearing to cover margin requirements.

The document outlines the technical impact for Eurex Clearing members who use Xemac today to provide margin collateral and Default Fund contributions and the changes within Eurex Clearing C7 CMS system due to the decommissioning of Xemac and migration to CmaX. The migration will take place in October 2022.

More information on the impacts of this initiative and how you should prepare for the impacts, can be found in the Preliminary Release Notes available by following these links:

www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/a21081-2716288

www.clearstream.com/clearstream-en/products-and-services/global-securities-financing/d21029-2716484

11.1 Changes due to the Decommissioning of Xemac

11.1.1 Collateral Account Setup

Xemac processing is based on so called "earmarking" of securities which are used to cover respective exposure values. The securities themselves stay in the CBF sub-account -550. As a result, no additional collateral account is needed.

However, Cmax processing is different because securities are transferred to a collateral account. The available securities are held on a source account (long box). Any change of collateral value – an increase, a decrease, or a substitution - triggers movement of securities from the source account to a dedicated collateral account or vice versa. Therefore, the new collateral accounts must be opened with Clearstream.

Customers can choose whether they want to use a source account on Creation or CASCADE/T2S for that purpose.

Members shall get in touch with their Clearstream Relationship Manger and/or Eurex Repo Sales Representatives to discuss the changes, re-confirm the future setup, execute legal documentation and trigger opening of new accounts as appropriate.

11.1.2 Collateral Location in C7 CMS in Xemac

C7 CMS system reflects in the GUI and in several reports the securities collateral locations. To reflect the change, the collateral locations linked to Xemac will be replaced by CmaX collateral locations.

Important: The changes mentioned in this subsection will be effective already on Friday, 21st of October, and not on Monday, 24th of October, as the SFR-related changes. This is of importance to include the new Collateral Locations in the customer processing.

Collateral location in C7 CMS		Collateral location long name
NEW	OLD	
CBFCXG	XEM/CL	CBF using CmaX and CBF/GS (CASCADE) accounts
CBFCXW	XEM/CL	CBF using CmaX and CBF/WR (6-series) accounts
CMXREX	XEMREX	CmaX GC Pooling ECB EXTended Basket
CMXREQ	XEMREQ	CmaX GC Pooling Equity Basket
CMXREI	XEMREI	CmaX GC Pooling INT MXQ GCP Basket
CMXREC	XEMREC	CmaX GC Pooling ECB Basket

Table 13. CmaX location in C7 CMS

11.2 Processing in CmaX

CmaX facilitates automatic allocation of security collateral based on pre-defined eligibility criteria between CM and Eurex Clearing. Automatic substitution of securities is subject to Corporate Action events and respective reporting.

The changes of exposure have to be entered using the Swift network or Clearstream XACT GUI. Eurex Clearing in its role as Collateral Taker receives copies of settlement messages that trigger bookings in the Eurex Clearing system. The claim value is reflected in C7 CMS system and relevant reports. The figure below displays processing of exposure increase and decrease:

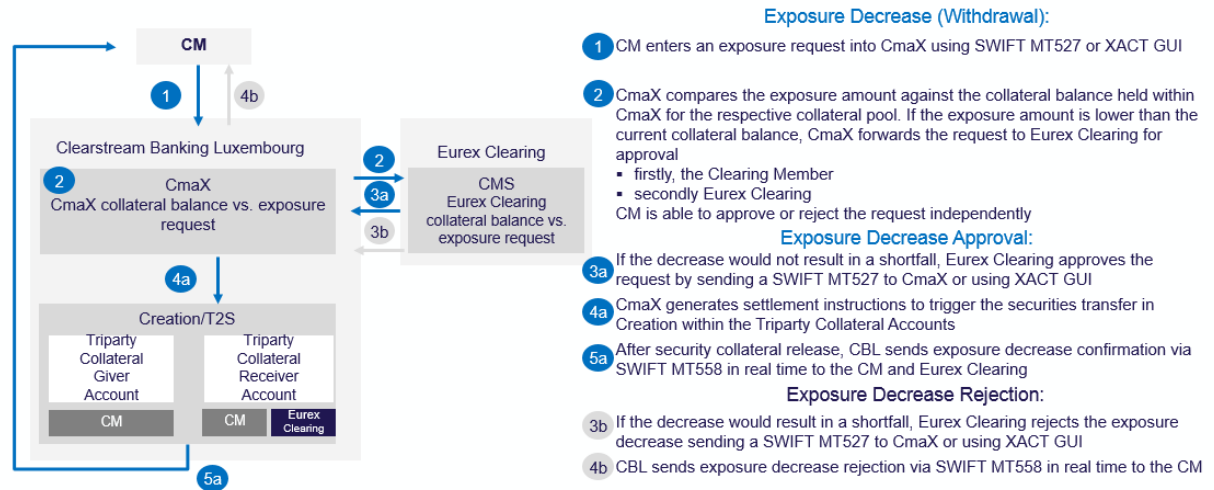


Figure 7. Automatic allocation of security collateral between CM and Eurex Clearing

11.3 Connectivity and Reports

The above listed collateral locations will be displayed in C7 CMS GUI and respective reports like CI720 and CI731. There will be no impact on members as the existing fields will be utilized.

The claim values are reflected in C7 CMS system and relevant reports.

In addition, Eurex Clearing's end-of-day report CD037 displays ISINs that constitute the claim values.

Clearstream supports a full suite of reports. For further information regarding Clearstream reports, its Xact GUI and connectivity options contact your Clearstream Relationship Manager.

11.4 Migration Weekend

It is planned that the cut-over will happen over the course of 3 days, from Friday, 21st of October 2022 to Sunday, 23rd of October 2022. On Thursday, from 3:45 pm CET Xemac will not be available for any changes of exposure, i.e., delivery or withdrawal of collateral in favor of Eurex Clearing (margin collateral, Default Fund contributions). The securities inventories will be frozen and prepared for migration.

During the migration weekend Clearstream and Eurex Clearing will process the replacement of Xemac by CmaX. This means, based on the agreed new setup of the collateral accounts the securities will be transferred and the collateral value will be generated as exposure values in CmaX automatically and visible in C7 CMS system. It is planned to move the collaterals from Xemac to CmaX on Friday, 21st of October, before 18:00 (closing of T2S), and this will be reflected in the Eurex reports created end-of-day Friday.

Clearstream will apply updated risk parameters on Monday, 24th of October 2022. In case value of securities decreases, the claim values will be adjusted accordingly, and Eurex Clearing might have to issue an intra-day margin call to ensure the risk exposure is covered.

For further information please contact your Key Account Manager.

12 Abbreviations and Glossary of Terms

Abbreviations	Description
AG	Aktiengesellschaft (public limited company)
ALM	Already Matched
ASDN	Actual Settlement Date Netting
C7	Clearing Architecture
C7 SCS	C7 Securities Clearing Service
CASCADE/T2S	CBF securities settlement system, where CBF has outsourced the settlement of German and international securities eligible for collective safe custody (CSC) to the T2S platform
CBF	Clearstream Banking Frankfurt
CBF-i	Clearstream Banking Frankfurt International
CBL	Clearstream Banking Luxembourg
CCP	Central Clearing Counterparty
CeBM	Central Bank Money
CET	Central European Time
CM	Clearing Member
CmaX	CmaX is the triparty collateral management system used by Clearstream Banking Luxembourg (CBL) and in future also by Clearstream Banking Frankfurt (CBF), used for the administration, management, and re-use of securities collateral for Clearstream customers
CoBM	Commercial Bank Money
CRE	Common Report Engine
Creation	CBL securities settlement system
CSDR	Central Securities Depositories Regulation
DCP	Direct Connected Participant
DvP	Delivery vs Payment
EB	Euroclear Bank
ECB	European Central Bank
EoD	End of the Day

Abbreviations	Description
FWB	Frankfurter Wertpapierbörse
GC	General Collateral
GUI	Graphical User Interface
ICP	Indirect Connected Participant
(I)CSD	(International) Central Securities Depository
ECB	European Central Bank
ISIN	International Securities Identification Number
ISO	International Organization for Standardization
MSU	Minimum Settlement Unit
MT	Message Type
NPU	Net Processing Unit
RAM	Repo Already Matched Instruction
PDR	Pending Delivery Report
PoA	Power of Attorney
RPA	Repo PoA Instruction (on-behalf of member)
RvP	Receive vs Payment
SAM	SCS Already Matched Instruction
SCS	Securities Clearing Service
SDN	Settlement Date Netting
SDR	Settlement Delivery Report
S	Settlement Day
SI	Settlement Institution
SPA	SCS PoA Instruction (on-behalf of member)
SWIFT	Global provider of secure financial messaging services
T2S	TARGET2-Securities
TM	Trading Member
XERE	Eurex repo electronic trading platform
XML	Extensible Markup Language
XEMAC	CBF collateral management system

Abbreviations	Description
Xemac decommissioning	Part of Clearstream's Collateral Mobility project, aiming to decommission the CBFs' Xemac collateral management system and migrate the collateral products into the second existing collateral management system CmaX of CBL

Table 14. Abbreviations and Glossary of Terms