



Service guideline interoperability

Table of contents

1. Introduction
 - 1.1 Purpose of the document
 - 1.2 Objectives
 - 1.3 Key elements of interoperability
 - 1.4 Implementation
2. Description of operational set-up
 - 2.1 Trade processing
 - 2.1.1 Start-of-day and end-of-day procedure
 - 2.1.2 Exchange/MTF trading
 - 2.1.3 Routing of trades
 - 2.1.4 Novation vs open offer / trade refusal and irrevocability
 - 2.1.5 Position accounting
 - 2.1.6 Multilateral netting
 - 2.2 Settlement
 - 2.2.1 General
 - 2.2.2 Buy-in
 - 2.2.3 Corporate actions
 - 2.3 Risk management
 - 2.3.1 General
 - 2.3.2 Interoperability fund
 - 2.4 Clearing Fund
 - 2.5 BCP



1. Introduction

1.1 Purpose of the document

The purpose of this document is to give a high level description of the concept of interoperability between EMCF and multiple other CCPs and the implications and operational impact of this on the clearing participants of EMCF.

1.2 Objectives

The objective of interoperability, or competitive clearing, is to provide the trading and clearing participants on various trading venues the possibility to choose which CCP clearing service provider they want to use for the different markets. Thus enabling the market participants to consolidate their flows and to better manage their settlement flows and risk exposure. It must be made clear that choosing a CCP is only possible for trading venues that offer a competitive trade model, meaning that their transaction feed is shared with multiple CCPs that interoperate.

1.3 Key elements of interoperability

- a. trading and clearing participants will be able to choose the CCP they prefer amongst the group of interoperable CCPs.
- b. correct routing of the trades is the responsibility of the exchange or MTF.
- c. inter-CCP positions will be margined as all other participant positions
- d. CCPs will call each other for these margins to be collateralized in full
- e. inter-CCP collateral will be sourced from the clearing participants
- f. inter-CCP positions will be settled between CCPs the same way as position between a CCP and its clearing participants will be settled (although some timelines specifically for partial settlements may differ).
- g. for clearing participants, the settlement procedures do not change.
- h. Interoperable CCPs do not contribute to each others clearing or default funds.
- i. Interoperable CCPs do not charge each other with clearing and settlement fees (or any other fees).
- j. Clearing participants of EMCF are not required to sign any new contracts or documents

1.4 Implementation

EMCF plans to introduce competitive clearing as of January 2012 for the Chi-X and BATS markets. Interoperability for the NASDAQ OMX Nordic markets is planned to start in April 2012. The group of CCPs with which EMCF will interoperate, differs per market. For Chi-X and BATS we will interoperate with EuroCCP, X-Clear and LCH.Clearnet. For NASDAQ OMX Nordics, we will interoperate with EuroCCP and X-clear.



For a full overview of the planned interoperable links and expected transaction feeds, please see the table below:

	EMCF	EuroCCP	X-Clear	LCH.Clearnet
Chi-X	✓	Jan 2012	Jan 2012	Jan 2012
BATS	✓	Jan 2012	Jan 2012	Jan 2012
NOMX Nordic	✓	Apr 2012	Apr 2012	X
Turquoise	Exp. Q1 2012	✓	Nov 2011	Nov 2011
Burgundy	✓	X	May 2012	X
Swiss Exch.	Exp. 2012	Exp. 2012	✓	✓
Quote	✓	tbd	tbd	tbd

It may be that, although a trading venue is able to share its trade feed with multiple CCPs, some (geographical) markets or specific products traded on that venue will not be included in the interoperable arrangements.

EMCF is actively pursuing other exchanges and MTFs to obtain their transaction feeds in order to create a truly competitive landscape throughout Europe.



2. Description of operational set-up

2.1 Trade processing

2.1.1 Start of Day (SoD) and End of Day (EoD) procedure

Every business day before opening of the markets, a start-of-day (SoD) procedure is executed between EMCF and the trading venues. The purpose of this procedure is to ensure that the static data maintained within the EMCF system, matches with the static data maintained in the systems of the trading venues. The procedure is carried out by uploading and comparing (all fully automated) a product and a participant file. Any discrepancies are reported and will be solved before the market opening.

At the end of every business day the exchanges and MTFs will upload an end-of-day trade file to EMCF. EMCF reconciles this file against all real time received and processed trade messages. There is a procedure in place to resolve reconciliation issues.

These procedures between EMCF and the trading venues do not change with the introduction of interoperability. Please note that these procedures are bilaterally agreed between EMCF and the trading venues. As far as we are aware, there is no obligation for other CCPs to have a similar procedure in place.

There are no SoD or EoD procedures defined between interoperable CCPs.

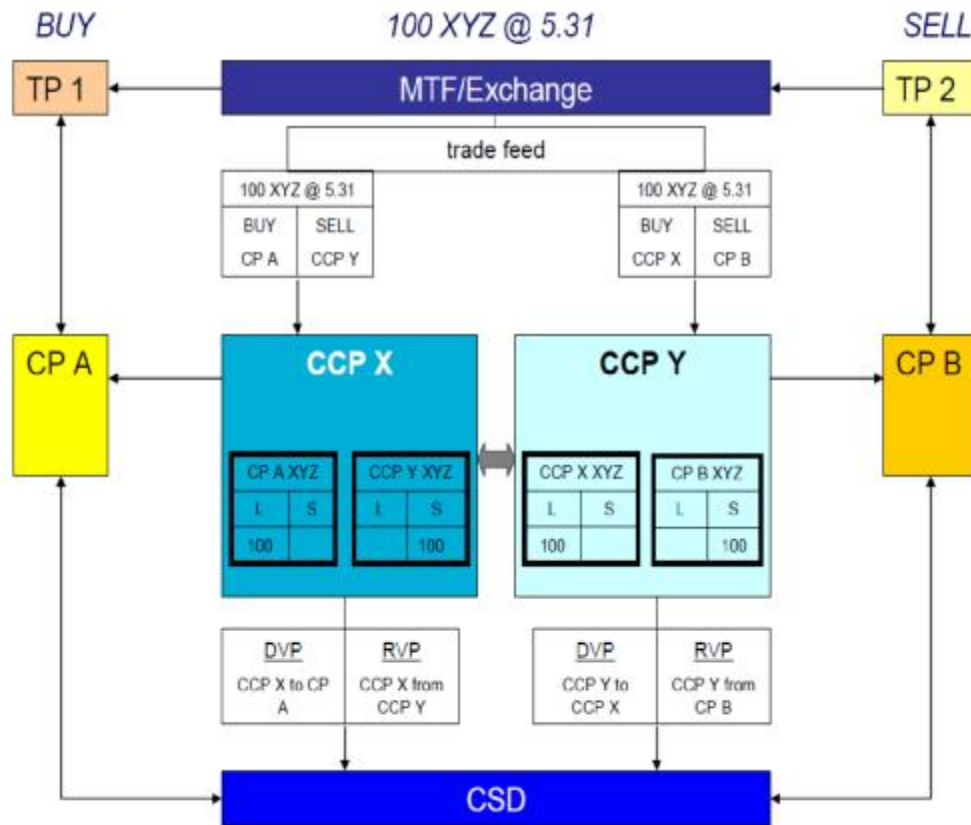
2.1.2 Exchange/MTF Trading

Trading on the exchanges and MTFs will not be different from the way it is currently conducted.

2.1.3 Routing of Trades

Routing of the trades is dependent on the way the trading participants (TPs) are set up in the trading systems. The trading venues rely in this respect on the information (in case of EMCF in the form of signed Statements of Authority) received from the CCPs. A TP can choose a different CCP for each geographical market, e.g. it can choose EMCF to clear its UK trades and another CCP to clear its French ISINs.

In the case where the buying and the selling entities use different CCPs, the CCP of the buyer will receive trade information specifying that the seller is the CCP of the selling entity. The selling entity itself is not revealed to the CCP of the buying entity and vice versa. See the picture below for a schematic overview:



The account structure and allocation of trades to the different accounts within the structure in the clearing system of EMCF does not change when interoperability is introduced.

2.1.4 Novation vs open offer / trade refusal and irrevocability

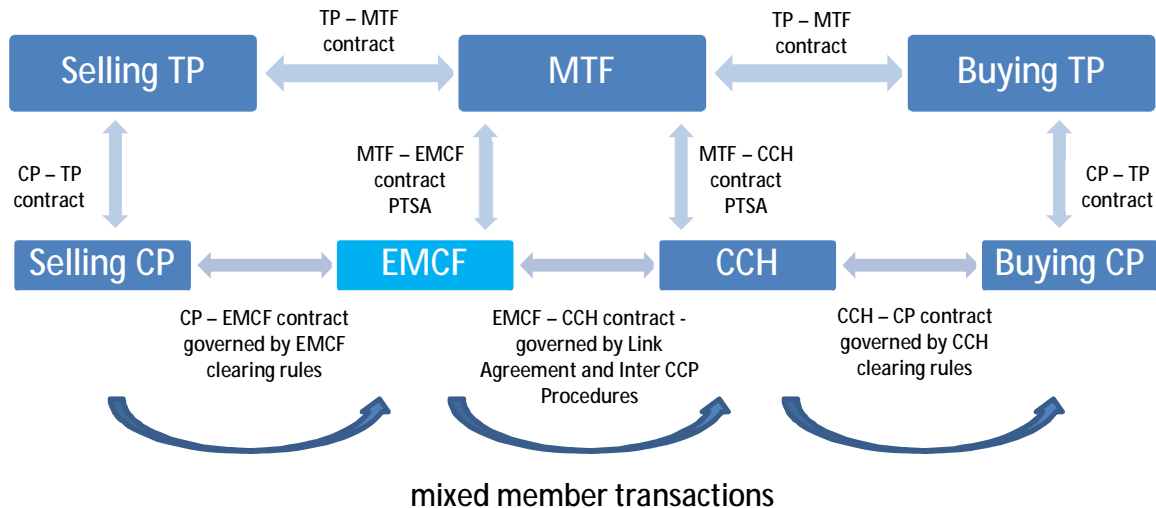
Under the interoperability agreements (the Master Clearing Link Agreements or MCLAs) trades cleared by EMCF with another CCP (or CCH) as counterparty, will be subject to open offer. Trades whereby both sides of the transaction are cleared by EMCF are still subject to novation.

In the MCLAs, concluded between EMCF and each of the linked CCP, the rules are laid down which apply to the two CCP's and to the interoperable transactions between the two CCP's. The MCLA is a contract that needs both linked CCP's to agree to any changes, which creates the necessary legal certainty. The linked CCP's become special participants (Cooperating Clearing Houses or CCHs) in each others books by agreement of the Link Agreement.

Contracts between EMCF and a CCH arise as a result of "mixed member transactions". Mixed member transactions are trades between parties which each employ another CCP, as shown in the picture below. It is of importance to note that an "all or nothing" approach is used: either there



are three contracts, or there is no contract at all for trades involving two CCP's. For convenience, all other contractual relationships between the parties involved are also shown in the picture below.



Two aspects are relevant to the contract formation, namely (i) the distinction between novation and open offer and (ii) trade refusal.

Novation has been the legal basis for EMCF. Novation imagines that a legally binding trade is made between CP's which is then transferred from the CP's to EMCF.

The introduction of open offer next to the existing method of novation by EMCF is necessary to interoperate with a CCH which uses open offer contract formation. EMCF cannot be interoperable with a CCH if a CCH uses a different system of formation of contract, without both EMCF and the CP's incurring legal risk.

Open offer does not contemplate that the trade itself is legally binding - the only legal agreements that ever exist are the trade legs between the clearing participants and EMCF and of EMCF with the CCH. In the open offer system, we do not need to be concerned about the legal intentions of the trading participants. Each trading participant states that it will conclude trade legs with EMCF on the terms of the trade feed, either directly or as agent for its (general) clearing participant.

The CRB has been amended to cater for trades based on open offer next to trades based on novation. Once the trade legs have been posted in EMCF, the CP's have similar insolvency protection under the settlement finality laws, both for novation and open offer. The rules of the CCH determine which of the two methods is employed. If the CCH operates on the basis of open offer, the rules for open offer in the CRB apply.



EMCF is permitted to refuse to clear a trade if a CCH has refused the matching trade leg. Rejection by a CCH is only possible in case of a systems error or a communication error, in case of a breach of an agreed limit set by a CCH towards its CP, in case of a suspension of trading or listing on the relative trading venue or if otherwise permitted by the respective CCP's trade refusal rules. Again, the "all or nothing" approach is used: either there are three contracts, or there is no contract at all. Please also note that under the interoperable agreements, CCPs can not refuse trades directly to one another. Refusal to clear a trade leg is always reported to the trading venue involved. It is the trading venue's responsibility to consequently inform the CCP on the other side of the trade, in case of mixed member transactions.

Furthermore, the Link Agreements and Regulation Trade Refusal caters for the possibility of a suspension of clearing services in respect to one or more Exchanges in case of system malfunctions or emergency situations (such as a banking crisis or disruption of the payment and settlement infrastructure). In such a case the formation of new contracts will stop.

2.1.5 Position accounting

CCPs with which EMCF will interoperate (coordinated clearinghouses; CCH), will have one single omnibus position account in the books of EMCF. There will not be separation or segregation of positions of a CCH in the books of EMCF.

2.1.6 Multilateral netting

The process of multilateral trade date netting will not change on account of the introduction of interoperability.



2.2 Settlement

2.2.1 General

Settlement between EMCF and its CPs will continue in exactly the same manner as today.

The settlement calendar for each market will be agreed annually by the CCPs jointly and will be based on local market practice.

Settlement between EMCF and other CCPs will be executed in the same way as settlement between EMCF and its CPs. There may be differences per market in the timelines used for partial settlements and the CCPs may agree upon a threshold in settlement value for conduction a partial settlement between CCPs.

There will also be no changes to the procedures for handling failed settlements by EMCF towards its CPs.

2.2.2 Buy-in

The buy-in regime of EMCF for CPs does not change with the introduction of interoperability. However, if EMCF is to receive securities from another CCP, under the agreed inter-CCP procedures, it cannot initiate a buy-in against the other CCP when, under EMCF's own buy-in rules, it would be appropriate to do so. Instead EMC will notify the other CCP involved of the occurrence and will request the other CCP to prioritise the failing inter-CCP obligation for settlement within the CSD, if possible, or to start up a buy-in procedure against it's own members in order to fulfil the outstanding inter-CCP delivery obligation.

When the settlement cannot be prioritised and a buy-in procedure cannot be initiated by the selling CCP on its own members, then the selling CCP will inform the buying CCP that the buy-in has failed and that the trade will be cash compensated instead. The selling CCP will cash compensate the buying CCP at 120% of the last publicly available closing price for such security on the principal stock exchange where it is listed, and will forward any proceeds to the buying CCP.

2.2.3 Corporate Actions

Also in the case of corporate actions, the general rule is that these will be kept on being processed and handled between EMCF and its CPs for each market as described in the Regulation Corporate Actions. In the inter-CCP procedures it is stipulated that CCP treat each other as they treat their regular CPs in this respect.



2.3 Risk Management

2.3.1 General

In an interoperable world, CCPs will have open positions pending for settlement in each others books. Each CCP will margin these open positions, using its own margin calculation methodology, as it would margin any other open position of a clearing participant.

The margin requirement imposed by one CCP to another must be covered in full by putting up sufficient collateral. The way this collateral is sourced, is in principle at the discretion of each CCP involved but must always meet the conditions imposed by the joint regulators. This means, e.g., that each CCP must have a procedure in place which enables the CCP to source the inter-CCP collateral requirements from its clearing participants.

In order to provide a truly scalable and transparent model (as mandated by the joint regulators), EMCF will source this new collateral from its clearing participants.

2.3.2 Interoperability fund

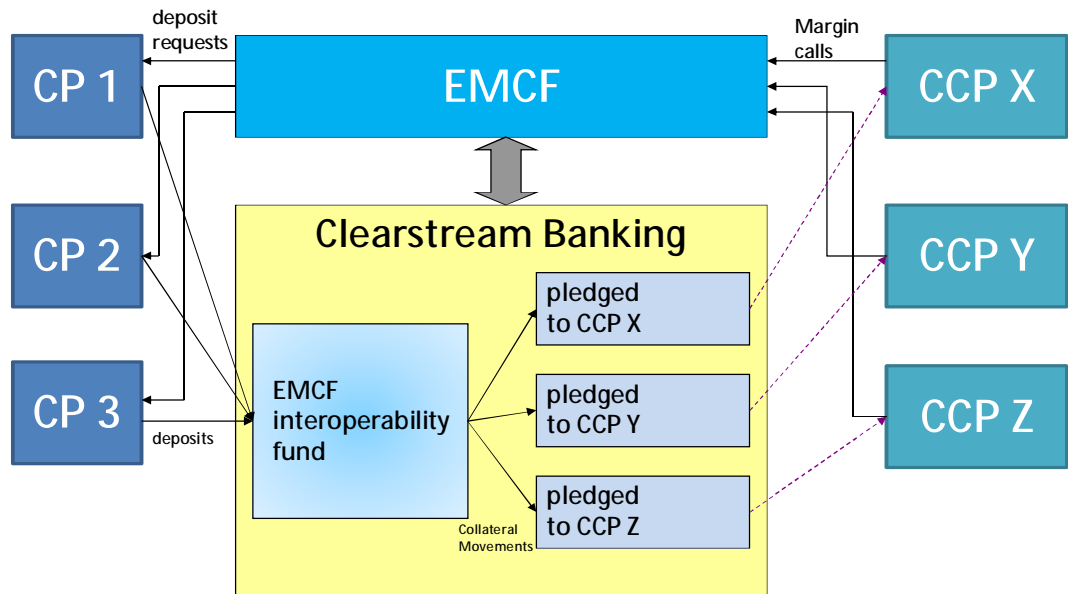
In order to be able to honour margin calls received from other CCPs with which EMCF will be interoperable, EMCF has created a new fund: the Interoperability Fund. The fund will be made up of deposits made by the clearing participants of EMCF. The fund will be in the name of EMCF with the sole purpose to enable EMCF to provide collateral to other CCPs to cover their margin requirements in respect of the positions of EMCF with these other CCPs.

Interoperable collateral will be held in accounts with Clearstream Banking Luxemburg (CBL). This also means that the EMCF interoperability fund will be held in an account in the name of EMCF with CBL.

Every CP set up in the EMCF clearing system to be active on an interoperable market, will be required to make deposits in EMCF's interoperability fund. As long as not all trading venues are interoperable, CP's which are only active on a trading venue that is not (yet) interoperable will not be required to make deposits in the fund.

A deposit in the interoperability fund is made by a transfer of eligible securities or cash in Euro to the interoperability fund account in the name of EMCF at CBL. On the basis of the margin calls received, EMCF will consequently transfer collateral from this account to separate accounts within CBL, each in the name of EMCF but pledged to a different CCP with which EMCF is interoperable.

Please see the picture below for a visual overview of this set-up.



The allocation of deposit amounts across clearing participants is based on each clearing participant's relative margin market share.

The relative margin market share for a clearing participant is defined as the average margin based on the previous thirty (30) clearing days of the Clearing Participant's Open Positions in Securities which can be settled through the Co-operating Clearing Houses divided by the average Margin based on the previous thirty (30) Clearing Days of all Open Positions in Securities which can be settled through the Co-operating Clearing Houses.

If CP's join EMCF and start their relationship with EMCF during the month, they will be included in making deposits in the interoperable fund from the day their relationship with EMCF is formally started. The consequence of this is that EMCF will recalculate and update the relative margin market share of the remaining CPs.

This margin market share percentage is multiplied with the sum of the daily margin calls by each of the Co-operating Clearing Houses in order to make up the total deposit in the EMCF interoperability fund.

Every interoperability fund deposit call will be rounded up to the next € 100,000.

Interoperability fund calls will be sent separately from the normal margin calls to each CP by e-mail between 08:00 and 09:00am CET on each clearing day. The CP receiving a call to make a deposit in the interoperability fund, must do so in accordance with the stipulations and procedures of the Regulation Interoperability Fund.



The details on timelines, eligible securities for the fund, account information and other details and procedures on making deposits and withdrawals, can be found in the Regulation Interoperability Fund.

2.4 Clearing fund

In accordance with the Code of Conduct and the guidelines provided by the regulators, CCPs do not make contributions to each others clearing or default funds. This way, they do not incur an indirect risk on the CPs of another CCP.

Please note however, that the positions of each CCH in the books of another CCP are included when we perform the daily stress scenario calculations.

2.5 BCP

Once interoperability goes live, CCP will maintain their own BCP plans as they are today. Therefore, the introduction of interoperability does not change these plans as such.

It is the responsibility of the trading platforms to always ensure a fair and orderly market. Therefore, they will define their own measures in order to ensure this, when one of the CCPs receiving a trade feed from such a platform, would be affected by a business continuity issue.

- 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -