

Service Overview

1 June 2012



EuroCCP

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**1.1 About European
Central
Counterparty
Limited**

This document provides an overview of European Central Counterparty Limited (EuroCCP) services and processing procedures.

It is not intended to serve as a legal document. EuroCCP services are provided only in accordance with the terms of the EuroCCP Rules and with its Procedures, as in effect from time to time. They are subject to change and development. Current versions of EuroCCP's Rules (and certain Procedures) are available on EuroCCP's website at www.euroccp.co.uk.

EuroCCP services and processes described in this document include:

- Application process and Participant setup
- Trade capture and validation
- Netting
- Risk management
- Settlement

The information in this service description is directed solely at prospective and existing Participants in European Central Counterparty Limited (EuroCCP), which are limited to entities that are authorised or exempted persons for the purposes of the Financial Services and Markets Act 2000, or persons with equivalent regulatory status outside the UK.

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2.1 About European Central Counterparty Limited

European Central Counterparty Limited (EuroCCP) is a central counterparty that supports pan-European securities trading. By delivering efficient post-trade processing and robust risk management at low cost, EuroCCP seeks to offer the highest-value clearing and settlement in Europe.

Through novation, EuroCCP substitutes itself for all counterparties that use its services, becoming the buyer to each seller and seller to each buyer, thus assuming counterparty risk for its Participants and ensuring settlement of trades in the event of Participant failure. EuroCCP processing also ensures anonymity for all parties from the onset of a trade through clearing and settlement.

EuroCCP is a subsidiary of The Depository Trust & Clearing Corporation (DTCC). DTCC is also the systems developer and facilities manager of EuroCCP. As the holding company for National Securities Clearing Corporation (NSCC), the largest clearing corporation in the United States, DTCC lends EuroCCP the experience gained from implementing systems capable of processing high transaction volume.

Responsibility for the governance and strategic direction of EuroCCP falls to its board of directors, the majority of whom are representatives of EuroCCP Participants.

2.2 Benefits of participation

- Effecting of trades against a central counterparty capable of processing a high volume of trading in multiple currencies with clearing, netting and subsequent cross-border settlement throughout Europe.
- Reduction in the number of settlement transactions, via netting. Capital efficiency increases as multiple payments are reduced to a single net trade-date position per ISIN.
- A central counterparty process that is European in governance and jurisdiction while leveraging DTCC's experience and expertise.
- Single low cost per trade across all markets. As volumes increase, Participants benefit from reduced clearing costs due to economies of scale.

2.3 General eligibility requirements for EuroCCP participation

A prospective EuroCCP Participant must be a corporation, partnership or other business organization regulated under the securities and/or banking legislation of an European Economic Area State or any other country acceptable to EuroCCP. Firms wishing to clear transactions through EuroCCP for other market participants (referred to as General Clearing Participants or GCPs) must demonstrate excess regulatory capital of not less than €70 million. Firms seeking to clear for themselves (referred to as Individual Clearing Participants or ICPs) must have excess regulatory capital of not less than €20 million.

Applicants must possess the personnel, physical facilities, books and records, internal procedures and accounting systems necessary to promptly handle transactions, fulfil anticipated commitments and meet operational requirements. Firms should have an established business history or personnel with proven operational experience. An applicant to EuroCCP must also have a satisfactory history of compliance with its regulator. Table 1 shows the various roles firms may play in EuroCCP.

2.3a Table 1. Firms' trading and clearing roles

Type of entity	Trading Platform member?	EuroCCP Participant?	Criteria
Individual Clearing Participant (ICP)	Yes	Yes	<ul style="list-style-type: none"> • Clears trades only for itself • Executes trades on a trading platform as an executing broker
General Clearing Participant (GCP)	Yes or No	Yes	<ul style="list-style-type: none"> • Clears trades for itself and other firms that execute trades on a trading platform • May execute trades on a trading platform as an executing broker
Non-Clearing Firm (NCF)	Yes	No	<ul style="list-style-type: none"> • Executes trades on a trading platform • Clears through a GCP

2.4 Application and process and Participant setup

A prospective EuroCCP Participant must be a corporation, partnership or other business organization regulated under the securities and/or banking legislation. Applicants for participation must complete an application that includes a profile of the applicant and a number of legal documents. During the application process, the applicant must indicate whether it wishes to function as a GCP that can clear transactions both for itself and for other "Non-Clearing Firms" (NCFs) or as an ICP. An applicant for GCP status must identify those NCFs for which it will clear transactions through EuroCCP from each applicable trading platform at each relevant Central Securities Depository (CSD).

EuroCCP provides Participants with the ability to establish multiple accounts and designate one or more accounts as Client accounts. In addition, Participants may designate, for each of these accounts, if it is a netting or non-netting (gross) account.¹ Each ICP and GCP instructs EuroCCP how to set up its accounts, and allocate transactions among those accounts, for each NCF and trading capacity (that is, whether it is trading as principal or agent).

Each GCP and ICP must provide the following:

- A list of CSDs at which it is a member (either directly or through a settling agent), including account information for settlement instructions
- Settlement agent that it uses at each CSD
- Contact at each settlement agent for each CSD
- A settlement instruction power of attorney in all markets where available

¹ In Spain, EuroCCP supports the aggregation of transactions whereby two settlement positions are created: a position that is the sum of all buy transactions and a second position that is the sum of all sell transactions.

Each GCP must also provide certain information for each NCF for which it clears.

2.5 Communication interfaces supported

EuroCCP supports communications with its Participants using the following methods:

- DTCC's SMART service
- SWIFT
- BT Radianz
- File Transfer Protocol Secure (FTPS)

The first three options allow browser access, file transfer capability and messaging, while FTPS only allows for file transfers.

2.6 Daily trade information processes

The daily processing flow for EuroCCP consists of the following:

- Trade capture from the trading platform
- Trade validation and novation
- Reporting validated Accepted Trades to Participants
- Netting processing
- Risk management processing
 - Margin Amount and Guarantee Funds calculation and collection
 - Participant reporting
- Cash and securities settlement processing
- Corporate action events covered:
 - Mandatory entitlements/distributions
 - Mandatory entitlements/distributions with elections
 - Mandatory transformations
 - Voluntary offers

EuroCCP supports:

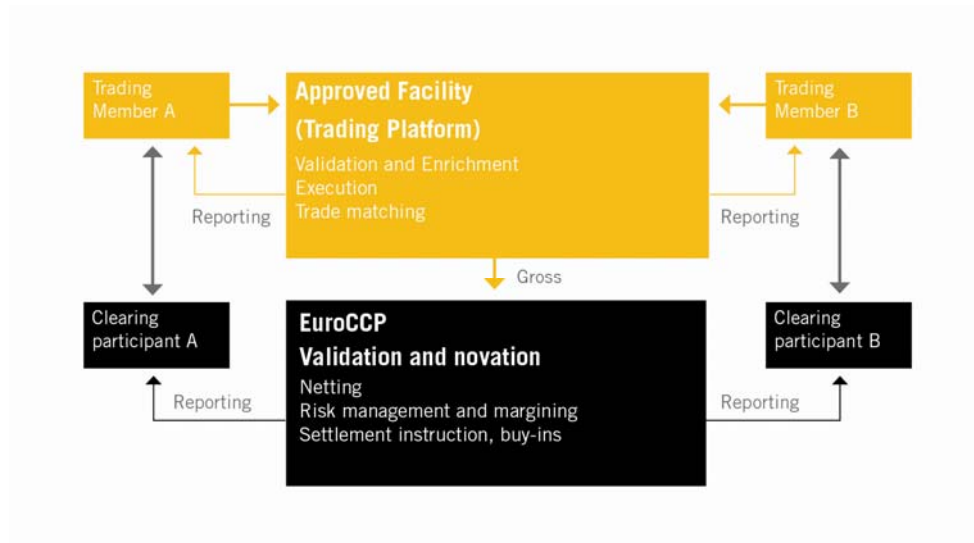
- The trading of eligible securities in multiple currencies
- A single settlement location (CSD) per ISIN/currency/trading platform combination
- Trading and settlement in the same single currency

The following sections briefly describe how each of the above processes function.

EuroCCP is linked to multiple trading platforms (also known as Approved Facilities) for the purpose of receiving trades for clearing at EuroCCP and settlement via settling agents at relevant CSDs. EuroCCP makes available to each trading platform static data, including information on eligible securities, Participants and CSDs.



Throughout each trading day, a trading platform submits eligible trades to EuroCCP in real time. EuroCCP-eligible trades are those in which both counterparties have effective arrangements for clearing at EuroCCP and the security (and currency combination) being traded is EuroCCP-eligible.



4.1 Trade data validation

Upon receipt from a trading platform, EuroCCP validates trade data immediately to ensure that all required data are in an acceptable format and that the trade passes certain business rules. For example, all trade messages must contain (among other things) a valid ISIN; if not, the trade is rejected. If a trade does not pass all validations, a reject is returned to the trading platform. Depending upon the reason, the trading platform may correct the trade and resubmit it to EuroCCP for processing.

4.2 Assignment of settlement attributes

For each valid trade side, EuroCCP assigns the following attributes:

- CSD where the trade will settle
- Participant responsible for the trade (ICP or GCP)
- Participant's account where the trade will be processed
- Settlement date
- Contract amount

Settlement location

EuroCCP determines the CSD where the trade will settle based on the combination of ISIN and currency reported in the trade message.

Responsible Participant

Each trade received by EuroCCP must clear through a valid Participant. Where an NCF executes a trade, the firm must have a clearing arrangement with a GCP. EuroCCP provides flexibility for NCFs to have different GCP relationships in each CSD.

Applicable Participant's account

Each trade must be applied to a specific Participant's account. EuroCCP uses the combination of NCF, CSD and trade capacity from the trade message to apply the trade to a specific account for netting and settlement.

Settlement date

Unless reported otherwise by the trading venue, EuroCCP calculates the settlement date for a trade using the trade date and the default settlement cycle for the CSD where the trade will settle in conjunction with the related national holiday calendar. The default settlement cycle is the number of days from the trade date that a trade should settle in the relevant CSD, such as Trade Date Plus Three (T+3).

Contract amount

EuroCCP calculates the contract amount for each transaction using the share quantity and share price from the trade message. The result is rounded to two decimals.

4.3 Account Structure

EuroCCP supports two types of accounts for its Participants: House Accounts and Client Accounts. EuroCCP does not restrict which types of activity can be processed through these accounts; however, Client Accounts are intended for use where the Participant is under a legal obligation, or has agreed, to segregate assets held in relation to client transactions from its own funds.

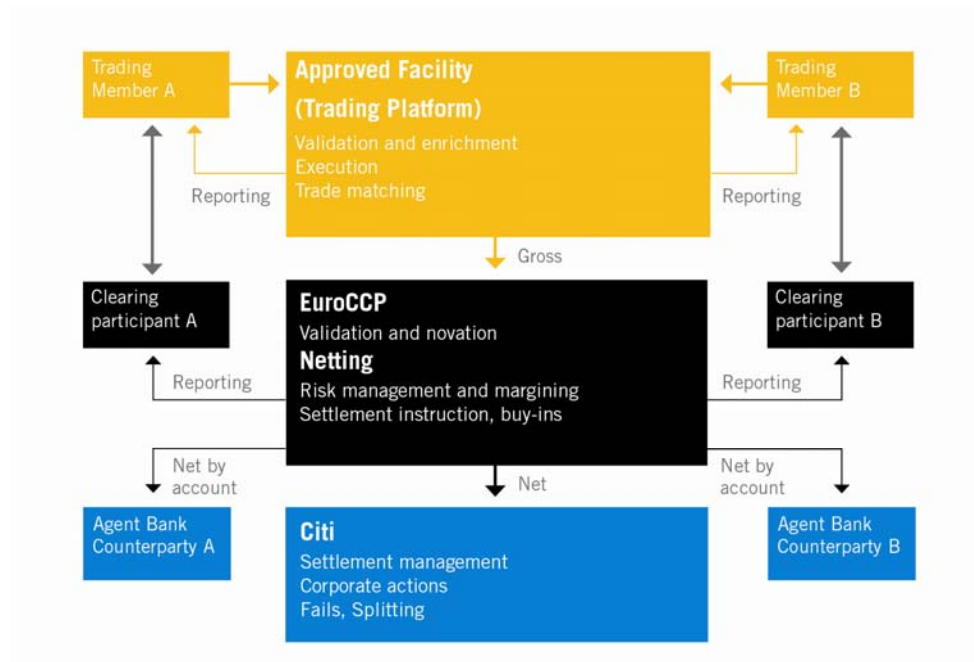
It is the responsibility of the Participant to establish and operate an account structure that allows it to meet its legal and contractual obligations to the parties for and with whom it deals, and to report transactions appropriately for applicable stamp duty purposes.

For each account, the Participant must designate whether it is a netting account or a non-netting account by CSD. Transactions indicated to settle through a non-netting account settle either on a gross or aggregate (Spain only) basis.

4.4 Accepted Trade Reporting

At the Participant's option, it may receive output reports showing Accepted Trades via Machine Readable Output (MRO) or ISO-formatted messages. EuroCCP is listed as counterparty on all trade output, thereby retaining ultimate counterparty anonymity.

Netting affords processing economies to EuroCCP Participants. Rather than settling multiple trade-for-trade obligations, Participants optimally settle one net obligation with EuroCCP per ISIN, currency, trade date, settlement date and netting account at the relevant CSD. Participants can determine whether their trades settle on a net or trade-for-trade (gross) basis. They can do so by specifying whether one or more of their accounts are netting or non-netting.



5.1 Netting

Based on Participant account set-up designations, EuroCCP determines whether a Participant's trades will be settled on a net or gross basis at the CSD, with the exception of Spain². Netting for each netting account results in a single long or short position per trade date, settlement date, ISIN and currency combination at a netted contract price.

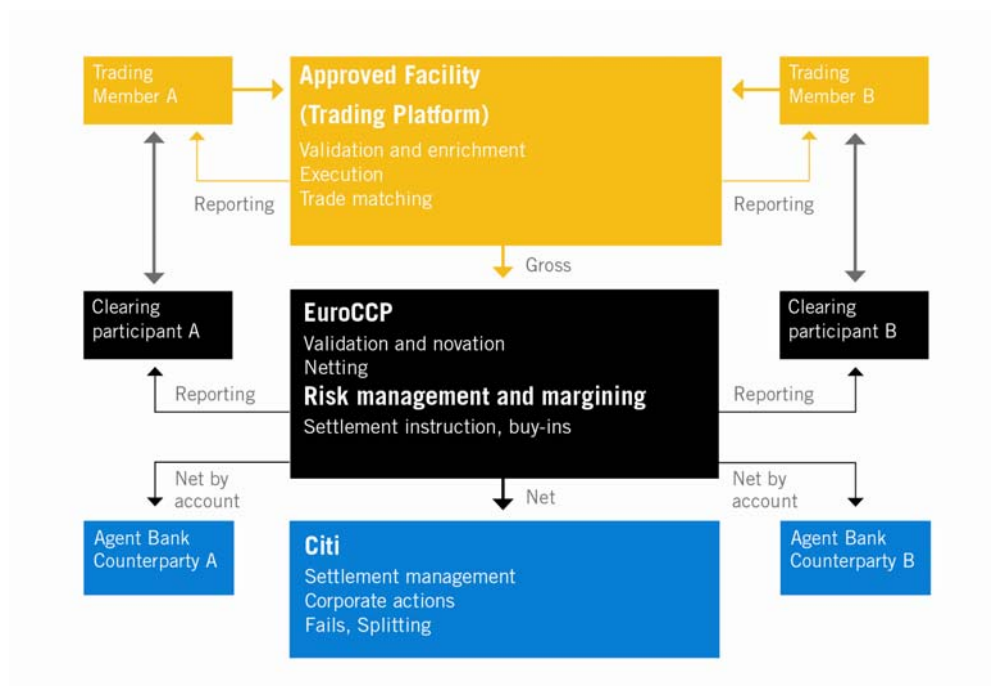
The netted position is calculated by offsetting the sum of the buy transactions (shares and consideration) against the sum of the sell transactions (shares and consideration). For each Participant and netting account, EuroCCP creates a settlement obligation for each ISIN, to receive or deliver the netted number of shares versus the netted cash amount. EuroCCP is interposed as the counterparty for each netted, aggregated or gross position. Participants deliver securities to and receive securities from EuroCCP only.

² In Spain, EuroCCP supports the aggregation of transactions whereby two settlement positions are created: a position that is the sum of all buy transactions and a second position that is the sum of all sell transactions

	EuroCCP supports trade-date netting. As-of trades and open fails resulting from a previous settlement date are not included in the netting calculation.
5.2 Position detail reporting	EuroCCP reports both Accepted Trades and the resulting net obligations to Participants at the end of the netting process. EuroCCP produces this report as an MRO file as well as in individual ISO-standard messages.
5.3 Settlement obligations	After netting is completed, EuroCCP creates and sends settlement obligations to settlement agents. Participants must take appropriate action to ensure their settlement instructions are matched at the local CSD on a timely basis.
5.4 Non-standard netting obligations	<p>EuroCCP's trade-date netting may result in non-standard obligations -- i.e., obligations other than receive of securities versus delivery of cash, or delivery of securities versus receive of cash. A non-standard net is created when shares and money move in the same direction (either receive stock and cash or deliver stock and cash) or when shares and/or money net to zero. Possible non-standard netting obligations:</p> <ul style="list-style-type: none"> • Receive stock and receive cash • Deliver stock and deliver cash • Deliver stock and zero cash • Receive stock and zero cash • Zero stock and receive cash • Zero stock and deliver cash • Zero stock and zero cash <p>For each contractual settlement date, EuroCCP nets the cash obligation of each non-standard net settlement into a single cash debit or credit per applicable currency to EuroCCP. EuroCCP gives Participants detailed reports linking individual payment amounts to the single net payment. EuroCCP sends the debit/credit cash nets, together with other funds-only settlement debits and credits (as described in "Settlement: Cash Settlement" p. 15) to the Participant's concentration bank for processing on the morning of settlement. If securities net to zero, EuroCCP does not create an obligation except in the case of UK and Irish securities for which it creates obligations for stamp duty reporting purposes only.</p>

Upon validation, Accepted Trades are novated. EuroCCP becomes the counterparty to each side of the Accepted Trade. In addition, when Accepted Trades are netted, EuroCCP, through re-novation, becomes the counterparty to each Participant's netted position. For settlement purposes, the selling Participant delivers to EuroCCP, and EuroCCP delivers to the buying Participant.

Novation to EuroCCP ensures that receiving Participants will receive shares against payment and delivering Participants will receive payment upon delivery of shares regardless of the financial condition of the counterparty to the trade.



6.1 Risk management mechanisms

To manage EuroCCP's risk of Participant default, EuroCCP maintains a comprehensive collateralisation program to cover the liquidation risk presented by a Participant's unsettled positions with EuroCCP and provide an aggregate pool of collateral to be used to settle transactions in the unlikely event collateral posted by an individual Participant is not sufficient to cover the risk presented by its respective positions. EuroCCP's collateralisation program consists of a Guarantee Fund and Margin Amounts. EuroCCP collects Guarantee Fund contributions and Margin Amounts from each Participant. Participants are advised of Guarantee Fund contributions and Margin Amounts daily via data file and e-mail by 07:00 London time. Payment is due in pounds sterling (GBP), euros (EUR) or US dollars (USD) by 09:30 London time.

6.2 Guarantee Fund

Each Participant is required to contribute to EuroCCP's Guarantee Fund. The required contribution calculated for each Participant is formulated on the basis of:

- Stress-test results
- Capital risk premium, which may be levied if a Participant's total Margin Amount requirement exceeds its excess regulatory capital
- Participant's internal risk rating based upon financial and operational considerations

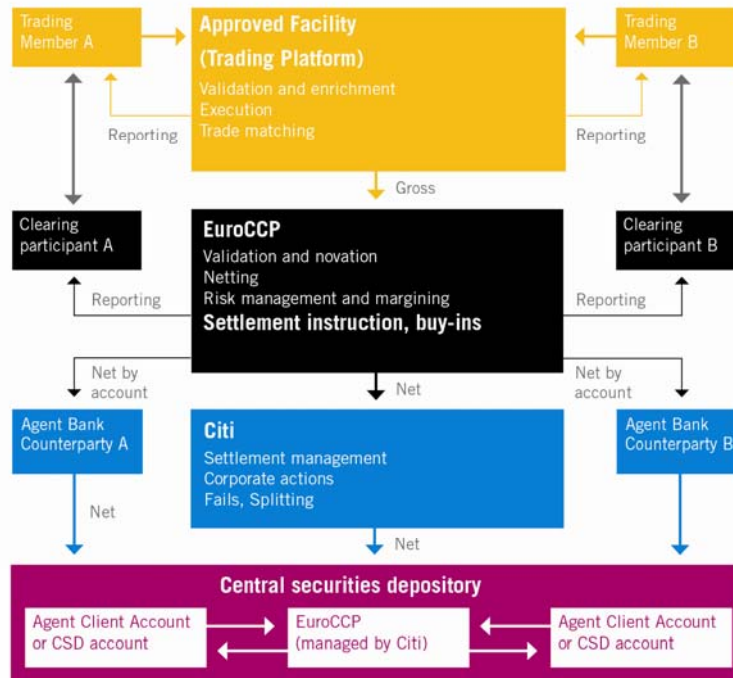
EuroCCP may adjust a Participant's Guarantee Fund contribution from time to time.

6.3 Margin Amounts

Each EuroCCP Participant is required to pay a daily Margin Amount and (if applicable) intraday Margin Amounts. If EuroCCP determines that a Participant's Margin Amount is insufficient to cover a Participant's activity or the exposure it presents, the Participant may be required to make additional deposits when requested. Margin requirements are calculated independently for Participants' House and Client accounts.

Calculation of Margin Amounts includes the following four components:

- **Mark to market:** Mark to market measures the realised and unrealised profit and loss based on the difference between the contract price and current market price. For netted trades, the delivery price of the net position is marked against the current market price. For gross trades, the contract price of the transaction is marked against the current market price. Mark to market is calculated on all unsettled positions regardless of trade or settlement date.
- **Volatility:** This component intends to capture the liquidation risk of a Participant's unsettled portfolio at EuroCCP and the risk of novating trades prior to collection of Margin Amounts. A Value-at-Risk (VaR) method is utilised. Periodic observances of profit and loss are designed to capture the risks caused by collecting margin after novation. EuroCCP may exclude non-netted trades from the volatility calculation and perform a separate volatility calculation on them.
- **Fails:** A haircut is applied to all fails on a daily basis. The haircut ranges from 5% at a minimum up to 20% and is based on the Participant's internal risk rating.
- **Special charges:** Special charges may apply to positions that pose additional risk to EuroCCP. Intraday Margin is calculated and charged when deemed appropriate.



7.1 Settlement through EuroCCP

Settlement takes place across Europe through bilateral matching of settlement instructions in the local CSD. Participants are either direct members of a CSD or instruct via a settlement agent. To promote settlement efficiency, EuroCCP requires Participants to provide powers of attorney (PoA) that allow it to act on their behalf and send settlement instructions to their settlement agents.

Settlement instructions cover netted positions for accounts designated as netting accounts, or on a trade-by-trade basis for their non-netting accounts. All instructions specify EuroCCP as counterparty. EuroCCP assigns a transaction reference number to each settlement obligation (whether net or gross); reference numbers are displayed on the MRO.

Settlement instructions are produced in a standard ISO format. The Settlement Agent or CSD provides settlement results for each settlement instruction sent.

Upon receipt of the settlement results, EuroCCP updates its books and records with the settlement status of each transaction. Failing transactions are monitored until actual settlement.

7.2 Settlement management

EuroCCP may need to divide a Participant's net settlement obligation into smaller settlement obligations to facilitate delivery of shares and reduce Participants' financing charges that result from box positions in EuroCCP's account at the local CSD. Box positions can arise if more than one delivery obligation of securities to EuroCCP (i.e., short positions) are necessary to satisfy EuroCCP's delivery obligation to a Participant with the

net long position, and not all such deliveries are made in a timely fashion. EuroCCP has a number of means to minimise the occurrence of box positions, e.g., by settling partial deliveries, splitting transactions, or shaping net obligations.

7.3 Buy-ins

EuroCCP monitors all fails to deliver and initiates buy-ins (close-outs) according to local market timing. For more information on buy-in timing, see the EuroCCP Procedures.

Participants are responsible for monitoring their fails in the context of local market timing for buy-ins. For those fails targeted for buy-in, EuroCCP will cancel the settlement instructions for the fail(s) being bought in on execution date.

EuroCCP calculates final proceeds based on price and quantity, any execution or settlement agent fees and other costs. If the buy-in is not executed (for example, it may be an illiquid stock), EuroCCP may close out the fail for cash compensation determined in accordance with its Procedures.

EuroCCP reserves the option not to buy-in aged fails on execution date if the security is undergoing a corporate action. The Participant failing to deliver will be held liable for the corporate action event.

7.4 CSD auto cancel

Most CSDs have provisions to cancel an open matched transaction that remains outstanding a specified number of days after the contracted settlement date. The number of days varies by CSD. The CSD cancels the transaction at the end of the business day and reports the cancelled instructions to EuroCCP's settlement agent, which in turn advises EuroCCP of the cancelled open obligations. EuroCCP updates its books and records to reflect the cancelled obligations and issues new deliver instructions to its settlement agent and the relevant Participants and their settlement agents. EuroCCP's settlement agent sends the new settlement instructions to the CSD for matching, and Participants are obliged to ensure those new transactions are matched in a timely fashion.

Note that most securities are bought in or closed out before the aged fail reaches the auto-cancel date at the local CSD.

7.5 Corporate actions

More information on EuroCCP's corporate action processing can be found in the Procedures available on its website.

7.6 Cash settlement

As the result of various transaction types and business events, including standard and non-standard net cash settlements, buy-ins, corporate actions/claims, settlement adjustments and billing/invoices, EuroCCP has cash obligations that need to be settled directly with its Participants. The cash obligations for these events are netted into a single obligation per currency per day. EuroCCP reports net obligations daily via MRO. EuroCCP also issues instructions to debit or credit the Participant's account at its designated cash concentration bank.

EuroCCP provides Participants with reports for its clearing and risk services throughout the life of the trade. Reporting covers trade validation, netting, settlement obligations, cash and risk activities. Distribution intervals for each report are either daily or intraday, as applicable. Participants can choose to receive reports via MRO or ISO-formatted messages. In addition, EuroCCP has real-time web screens for certain functionality, some of which also have enquiry capability.