Cboe Europe

Equities/Derivatives Web Portal Risk Controls Specification

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23rd February 2023

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1 Introduction

1.1 Overview

The Cboe Europe Equites (Cboe) Customer Web Portal offers a variety of tools that allow Participants to manage certain aspects of their exchange set-up and view information relating to their firm. The Web Portal is accessible to any individual that is associated with a Participant utilising a Cboe platform or service offering.

The Port Controls tool, available through the Web Portal, offers users (Participants or a third party authorised by the Participant, such as a General Clearing Member(GCM)) the ability to implement and modify certain port-level risk management settings in real time without the assistance of the Cboe Trade Desk.

Access to tools offered within the Web Portal is controlled through your firm’s Web Portal Account Administrator. After successfully logging into your Cboe Web Portal account, users with the appropriate access will be able to click on the Port Controls or Sponsored Access link in the Cboe Exchange Tools menu found on the left-hand side navigation bar.
2 Port Controls

Access to the Cboe Web Portal Port Controls tool is either in a read-only or read/write capacity. Users who require read/write access to the Port Controls tool should contact the Trade Desk with your Web Portal Account Administrator’s approval for this permission to be granted.

The below described risk controls are implemented per port level per trading identifier for the selected relationship (“risk controls”). All risk port controls are reset at the end of the day. By selecting the port owner’s Firm ID and Trading Identifier (Bank Code) relationship, users can view or modify the risk settings configured on each associated port (also referred to as trading session). The risk constraints implemented through the Port Controls tool offer pre-trade protection for orders and trade reports since the validation checks are completed at the order handler level prior to entering the matching engine.

2.1 Reports

Participants can view their implemented risk port controls through the following CSV reports accessed in the Port Controls tool:

An additional report of each port’s implemented risk controls can be accessed in the Cboe Web Portal Logical Ports tool > More Options > Port Attributes Info. This shows configured individual port risk controls. Participants should be aware of the risk minimisation functionality described below in Technical Details section.

2.2 Selecting the relationship

2.2.1 Direct

Ports that are owned by the Participant and have Participant owned Trading Identifiers (a.k.a. Bank Codes) configured on their ports are considered direct connections to the Exchange. A Participant can have multiple Trading Identifiers enabled on a single port. The risk settings for each of these Trading Identifiers must be updated separately within the Web Portal Port Controls tool even if these Trading Identifiers use the same port. Note the example below where the Participant “CBUK” has two Trading Identifiers “DEAL” and “EMHX”.

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2.2.2 Service Bureau

In a Service Bureau relationship, a Participant allows its Trading Identifier to be used on the ports owned by a technology provider, or Service Bureau. One Trading Identifier may be allowed on several different Service Bureaus’ ports. In these cases, a separate client relationship is created for each Service Bureau/Trading Identifier combination. Note the example below where the Participant “CBUK” has the Trading Identifier “EMHX” which is allowed on two separate service bureaus, “BATS” and “CBHX”:

2.2.3 Sponsored Access

A Sponsored Access relationship consists of a Sponsoring Firm and a Sponsored Participant. The Sponsoring Firm is the Trading Identifier owner and is the only entity in this relationship with access to the Sponsored Access Port Controls tool. The Sponsored Participant owns the trading ports but has no ability to make changes to its port-level risk settings using the Port Controls tool (referred to in section 5.1). Note the example below where the Sponsoring Firm “SELW” has two Sponsored Participants, “SELO” and “TSAC”:

Sponsoring Firm’s responsibilities

- To ensure that it meets its own regulatory requirements and those applicable to it as a Participant of Cboe
- To conduct appropriate due diligence on prospective Sponsored Participants
- To only offer Sponsored Access to suitable prospective Sponsored Participants (e.g. those who are competent, conversant with Cboe Rules and have suitable systems and controls in place)
• To use the pre-execution controls offered by Cboe and impose suitable levels, tailored to the individual Sponsored Participant
• To use the DROP COPY functionality provided by Cboe
• To monitor the activity of the Sponsored Participant, including its ongoing suitability and the effectiveness of the pre-execution controls

Sponsored Participant’s responsibilities

• To be competent and suitably experienced
• To have in place appropriate systems and controls, taking into account the nature and scale of its business
• To be familiar and comply with Cboe Rules and guidance
• To provide the Sponsoring Participant with sufficient access to monitor the Sponsored Participant’s activity on Cboe
• To take reasonable measures to prevent unauthorised use of its access to Cboe

2.2.4 BGUI Access

Cboe provides a trade reporting GUI for each environment allowing the manual submission, amendment and cancellation of Trade Capture Reports (TCRs) accessed through here:

This is represented through the BGUI relationship which must be configured before TCRs can be submitted through the Trade Reporting GUI.

2.3 Restrictions

This section sets out the types of cut-off controls that can be configured and performed through the Web Portal Port Controls tool.

2.3.1 Block New Orders
Participants can prevent all new inbound order flow in real-time by checking the ‘Block New Orders’ box and saving the change. Note that cancel requests for resting orders are still accepted when ‘Block New Orders’ is set to ‘True’.

2.3.2 Block Trade Reports

Participants can prevent all new trade report flow in real-time by checking the ‘Block Trade Reports’ box and saving the change. Note that cancel requests for Trade Reports are still accepted when ‘Block Trade Reports’ is set to ‘True’.

2.4 Maximum Per Order Limits

2.4.1 Maximum Quantity Per Order (Share or Contract Size)

The maximum number of shares (Equities) or contracts (Derivatives) that can be sent per order. If the specified limit is exceeded, the order is rejected. The value can be changed in real-time by entering the desired limit and saving the change. The default value for the Maximum Quantity Per Order is 100,000 for both Equities and Derivatives. For the Complex Order book the Maximum Quantity Per Order translates to the number of Complex Instruments.

2.4.2 Port Order Rate Threshold

The maximum number of messages that can be sent in a rolling one second window, calculated from the time a non-heartbeat message is received. If the value is exceeded in the current rolling one second window cycle, new order messages will be rejected, order modifies will be treated as cancels and order cancels will continue to be processed. The default value is 5000 messages per second.

2.4.3 Symbol Port Order Rate Threshold

The maximum number of messages that can be sent for a symbol in a rolling one second window, calculated from the time a non-heartbeat message is received. If the value is exceeded in the current rolling one second window cycle, new order messages will be rejected, order modifies will be treated as cancels and cancels will continue to be processed. The default value is 5000 messages per second.

2.4.4 Order Collar Percentage

The maximum percentage away from the Cboe reference price (defined in the Cboe Participant Manual) that an order price will be accepted. All Orders are subject to an Order Price Collar based on a reference price. If an order is received that would breach the Order Price Collar, the aggressive order will be rejected.

2.5 Duplicative Order Protection

Provides the ability to prevent duplicative orders being submitted if orders have the same Side, Price, Quantity and Symbol during a configurable amount of time. Users set the Time Threshold (in seconds), Order Count Threshold and the Action When Encountered (Reject Orders or Disable Port).
If the Order Count Threshold of duplicative orders is reached or exceeded within the Time Threshold, the Action When Encountered will be performed.

If Disable Port is selected, ALL new orders received will be rejected until an emailed request is submitted to the Trade Desk to reset the risk control.

Order Cancels will continue to be processed for orders accepted prior to tripping the Duplicative Order Protection check and Trade Reporting capabilities will be unaffected.

Example: If a User sets the number of orders to ten (10) and the number of seconds to three (3), the system will take the defined action (reject orders or disable the port) when 10 or more duplicative orders (i.e. 11 or more orders in total) have been received during a 3-second window.

2.6 Trade Report Limits

2.6.1 Maximum Quantity Per Trade Report (Share or Contract Size)

The maximum number of shares (Equities) or contracts (Derivatives) that can be sent per trade report. If the specified limit is exceeded, the trade report is rejected. The value can be changed in real-time by entering the desired limit and saving the change. The default value for the Maximum Quantity Per Trade Report is 99,999,999 for both Equities and Derivatives.

2.6.2 Maximum Number of Trade Reports

The maximum number of trade reports that are accepted per day. If the specified limit is exceeded, the trade report is rejected.

2.6.3 Trade Size as a Percentage of ADT Warning Threshold (Equities only)

Cboe will monitor this risk control and report back in real-time when a trade report value exceeds the FCA or ESMA defined Average Daily Turnover (ADT). This control allows you to relax the threshold at which the surveillance warnings are reported.

2.7 Permitted Markets (Equities Only)

This controls which symbols Participants can trade based on a symbol’s primary listing venue.

2.7.1 Maximum notional value per order per market

When the specific notional value is exceeded, the order is rejected. This control is set per listing market and can be specified in any Cboe supported currency. On BXE, CXE and DXE there is a default limit of ten million euros applied.

2.7.2 Maximum notional value per trade report per market

When the specific notional value is exceeded, the trade report is rejected. This control is set per listing market and can be specified in any Cboe supported currency. In BXE, CXE and DXE there is a default
limit of fifty million euros applied which can be raised upon request to the Trade Desk and in agreement with the CCP.

2.8 Daily Limits

2.8.1 Notional Daily Limits

This controls the level of risk (defined as executed notional value plus unexecuted notional value currently in the market) per day. If enabled during an active trading session, limits will not be effective until the next trading session. If disabled, all current settings are removed. Once enabled, the value can be amended in real-time. It is also possible to configure and enable controls on a gross or net (absolute value of buys and sells) basis independently. For trade reports, please be aware of the following: If both sides of the trade report are for the same Bank Code, then the gross notional value of the trade report is twice its nominal value (once for the buy leg and once for the sell leg). There is no net impact (as the buy cancels the sell).

Additionally, while unsolicited cancel/amends sent on the originating port will contribute to the limits of the original report, solicited cancel/amends will contribute to the limits of the port (or Trade Reporting GUI “BGUI”) that originated the cancellation/amendment request.

Please note that only Net limits are applicable to Derivatives (CEDX) platform. Net limits do not apply to orders submitted to the Automated Improvement Mechanism (AIM).

2.8.2 Notional Cutoff Value

If the specified notional value is exceeded the order or trade report is rejected. This control can be specified in any currency.

2.8.3 Market Orders Notional Cutoff Value

If using the Notional Value Cutoff, then by default market orders are not permitted. Optionally, a User may set a notional value (in the same currency as the overall limit), which must be between zero and 100% of the Notional Value Cutoff, up to which market orders will be accepted. When picking a notional value for this setting, please be aware that the impact of the order on overall exposure is not considered, as the order does not have a price at time of order entry.

2.8.4 Examples

Suppose $5M of limit buy orders have been executed; $2M of limit buy orders are in the market; $3M of limit sell orders have been executed; and $1M of limit sell orders are in the market.
In this scenario the GROSS and NET risk calculation is shown as:

\[
\text{GROSS risk} = \text{limit buy executed} + \text{limit buy exposed} + \\
\text{limit sell executed} + \text{limit sell exposed} \\
= \$5M + \$2M + \$3M + \$1M \\
= \$11M
\]

\[
\text{NET risk} = \text{ABS}((\text{limit buy executed} + \text{limit buy exposed}) - \\
(\text{limit sell executed} + \text{limit sell exposed})) \\
= \text{ABS}((\$5M + \$2M) - (\$3M + \$1M)) \\
= \$3M
\]

Suppose market orders are allowed; $5M of limit buy orders have been executed; $2M of limit buy orders are in the market; $1M of market buy orders have been executed; several market buy orders are in the market; $3M of limit sell orders have been executed; $1M of limit sell orders are in the market; $2M of market sell orders have been executed; and several market sell orders are in the market.

In this scenario the GROSS and NET risk calculation is shown as:

\[
\text{GROSS risk} = \text{limit buy executed} + \text{limit buy exposed} + \text{market buy executed} + \\
\text{limit sell executed} + \text{limit sell exposed} + \text{market sell executed} \\
= \$5M + \$2M + \$1M + \$3M + \$1M + \$2M \\
= \$14M
\]

\[
\text{NET risk} = \text{ABS}((\text{limit buy executed} + \text{limit buy exposed} + \text{market buy executed}) - \\
(\text{limit sell executed} + \text{limit sell exposed} + \text{market sell executed})) \\
= \text{ABS}((\$5M + \$2M + \$1M) - (\$3M + \$1M + \$2M)) \\
= \$2M
\]

### 2.8.5 Email Warnings

A percentage of the Notional Value Cutoff can be specified, the breach thereof will trigger an email to be sent to the configured email address list, separated by a comma. The described email warnings are configured for Gross Notional Value Limit, Gross Market Order Limit, Net Notional Value Limit and Net Market Order Limit when a limit warn percentage is specified between 1%-99%. Only one email per day will be sent per port per threshold exceeded. Please note that the email warning process is provided on a best endeavours basis and Cboe makes no guarantee as to email delivery.
2.9 Restricted Symbol List Management (Equities Only)

Participants can upload symbol lists via text file with one symbol per line, for each client relationship limited to five files upload per minute. Any orders submitted in affected symbols will be rejected by Cboe. Participants can also view the current list that is in place or clear the list entirely through this control. Applicable to Equities only.

Please note that for Cboe BIDS relationships only the restricted symbol list uploaded through CXE will take effect within the Cboe BIDS system for both LISX and LISZ. Uploads through DXE will not take effect within the Cboe BIDS system.

2.10 Cancel Orders or Trade Reports (‘Kill Switch’)

The following cut-offs can be performed using the Port Controls tool and are effective immediately in real time.

Note, Participants can block new order flow without pulling existing orders or Trade Reports from the market by selecting the ‘Block New Orders’ or ‘Block Trade Reports’ checkbox as described in the Restrictions section.

2.10.1 Cancel Open Orders

Participants can cancel all their existing open orders.

2.10.2 Cancel Open Orders and Pending Trade Reports, and Block Orders and Trade Reports

Participants can cancel open orders and pending trade reports in real-time and additionally block any new orders and trade reports.

2.10.3 Cancel Any Pending Trade Reports

Participants can cancel trade reports which are pending matching confirmation.

2.10.4 Cancel Open Orders within the Continuous Book Only (Equities Only)

Participants can cancel all their existing orders within the continuous lit and dark order books.

2.10.5 Cancel Open Orders within the Periodic Auctions Book Only (Equities Only)

Participants can cancel all their existing orders within the periodic auction book.

3 DROP Port Monitoring

Participants can configure actions that may apply to ports using their trading identifiers (except for Service Bureau ports) in the event of them disconnecting from their DROP port. To amend any of these settings please contact the Trade Desk.

3.1 Reject Orders on DROP port Disconnect
This feature restricts order and trade report entry capability based on the connection status of specified DROP ports. The Trade Desk should be provided with a list of DROP ports that the Participant would like to be monitored for their connection status. Once the association has been established, at least one DROP port in the master data centre must be connected in order for orders or trade reports to be accepted by Cboe. Otherwise, any new orders or trade reports entered will be rejected until at least one of the DROP ports has reconnected.

3.2 Cancel Open Orders on DROP Port Disconnect

Similar to the rejection option above, Participants may request Cboe to cancel all open orders on an order entry port, should all associated DROP ports disconnect.

3.3 Reject/Cancel Open Orders on DROP Port Timeout

Participants may tune the amount of time that must pass between the last associated DROP port disconnection and the time when the reject/cancel actions take effect on the order entry session(s). This setting has a default of thirty (30) seconds and the minimum allowed is zero (0) seconds. Once any associated DROP port reconnects, the timer is reset and reject actions will cease.

4 Automation

Cboe offers a Secure Web API allowing Participants to automate their risk management processes as documented in the Risk Management Port Controls Secure Web API specification.

5 Technical Details

5.1 Risk Minimisation

Where a more restrictive risk control exists at the port level (for example a default system value), a red asterisk * in the Port Controls tool is displayed to the user. If you wish to change the port-level limits or have any questions, please contact the Trade Desk.

5.2 FX Rates

Exchange rates used for normalisation on a given date will be the reference price published by the European Central Bank at the close of the previous day, where available.

5.3 Settlement Prices

Some trade reporting services allow the use and specification of settlement prices, as compared to prices reported for transparency purposes. Risk controls that utilise a concept of notional value apply against the settlement price and not the reported price.
6 Support

If you have any questions or would like to begin using the Web Portal Port Controls tool, please contact your Account Manager or any of the teams below for assistance:

Sales
SalesEurope@cboe.com
Phone: +4420 7012 8906

Trade Desk
TradeDeskEurope@cboe.com
Phone: +4420 7012 8901

Participant Services
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Phone: +4420 7012 8902

7 Revision History

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<thead>
<tr>
<th>Document Version</th>
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<tbody>
<tr>
<td>6.12</td>
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<td>Update to Sponsored Access section clarifying responsibilities</td>
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<td>Add details about duplicative order protection</td>
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<td>Add details about cancellation of pending trade reports and information on default notional values</td>
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<td>5.12</td>
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<td>Add support for configurable warning threshold for large trades.</td>
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8 **Disclaimers**

8.1 **No Warranties**

This Risk Management/Sponsored Access Risk Management tool is provided 'AS IS', without warranties, express or implied (except as expressly stated herein) including, but not limited to, any implied conditions or warranties of merchantability, accuracy, timeliness, completeness, performance or fitness for any particular use or purpose of this Risk Management/Sponsored Access Risk Management tool; any implied warranty arising from trade usage, course of dealing or course of performance, and of any other warranty or obligation with respect to the Cboe IT systems or other materials made available to the user of the Risk Management/Sponsored Access Risk Management tool and all such other warranties are hereby disclaimed. Subject to the Limitation of liability clause below, no responsibility is accepted by or on behalf of Cboe for any errors, omissions or inaccuracies in the Risk Management Tool/Sponsored Access Risk Management tool. When notified of an inaccuracy or issue, Cboe will use reasonable endeavours to rectify those inaccuracies or issues within Cboe’s control as soon as reasonably practical. Cboe accepts no liability for the results of any acts or omissions taken by you on the basis of the Sponsored Access Risk Management tool. This Risk Management/Sponsored Access Risk Management tool is not intended to replace your risk management tools. It is your responsibility to ensure that you maintain your own risk management tools that are adequate for the business you conduct.

8.2 **Limitation of liability**

The provisions of the Participant Agreement or the Trade Reporting Services Agreement, as applicable, in place with Cboe shall apply with respect to Cboe’s limitation of liability. You acknowledge and agree that the limitation of liability set out therein is reasonable. It is your responsibility to ensure that you maintain adequate insurance to cover any damages, losses, costs or expenses you might suffer in the event of any failure or unavailability of this Risk Management tool.

8.3 **Modification and discontinuation**
Cboe reserves the right at any time and from time to time to modify, edit, delete, suspend or discontinue, temporarily or permanently this Risk Management tool (or any portion thereof). You agree that we shall not be liable to you or to any third party for any such modification, editing, deletion, suspension or discontinuance.

8.4 Governing Law

The provisions under this Risk Management specification document having legal nature, shall be interpreted in accordance with the laws of England and Wales. In case of disputes, the parties agree to submit to the exclusive jurisdiction of the Courts of England.