Cboe Europe

Equities/Derivatives Web Portal Risk Controls Specification

Version 5.21

18th February 2021

Contents

1   Introduction

1.1   Overview

The Customer Web Portal allows customers to implement and modify a number of port-based risk management settings. The Customer Web Portal Logical Port Request tool can be used to submit requests to the Trade Desk to establish or change DROP Port Monitoring settings, while the Customer Web Portal Port Control tool allows customers to make on-the-fly changes to a number of other port-level risk attributes without the assistance of the Cboe Trade Desk.

1.2   Customer Web Portal

All customers have the ability to access and use the Customer Web Portal Logical Port Request tool or Port Controls tool. This includes customers that connect directly, customers that reach Cboe through a Service Bureau, and firms that act as Sponsors.

Customers who desire access to the Customer Web Portal must first obtain an account. This can be accomplished by contacting your Customer Web Portal Administrator or by sending an email to the Cboe Trade Desk. After successfully logging in to your Web Portal account, users with the appropriate access will be able to click on the Logical Port Request link or Port Controls link in the menus on the left hand side of their account page.

The Cboe Risk Management tool provides Users (Participants or a third party authorised by the Participant, such as a General Clearing Member) with the ability to set various constraints on orders for pre-trade protection and the ability to receive a DROP copy of the order and trade activity of users of their trading identifiers, whether they be Sponsored Participants, Service Bureaus, the Cboe Trade Reporting GUI or their own ports. The users' orders and trade reports are validated in the order handler prior to entering the matching engine. Based on parameters set by the User, the order or trade report is immediately passed on to the matching engine or rejected back.

2 Port Controls

Customers may directly modify various port-level risk attributes via the Port Controls tool link within the Customer Web Portal.
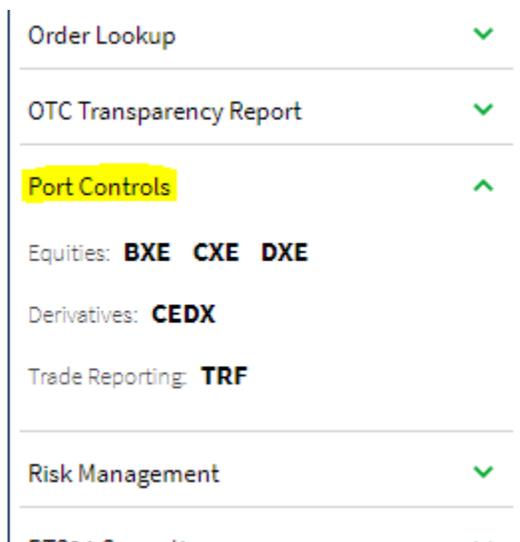
From this page, users may select the Firm ID and Trading Identifier (optional) of the ports they would like to edit settings for and proceed with configuration. The image that follows contains references within parenthesis to the section number of this specification that will describe each feature available within this tool.

2.1 Selecting the Client

2.1.1 Direct

Ports that are owned by the customer and have customer-owned Trading Firms (also referred to as a Bank Codes) allowed on these ports are considered direct connections to the Exchange. A customer can have multiple Trading Firms enabled on a single port. The risk settings for each of these Trading Firms must be updated separately within the Web Portal Port Controls even if these Trading Firms use the same port. Note that in the example, member Bats Trading, Inc. has two Trading Firms: BATS and BZXX.
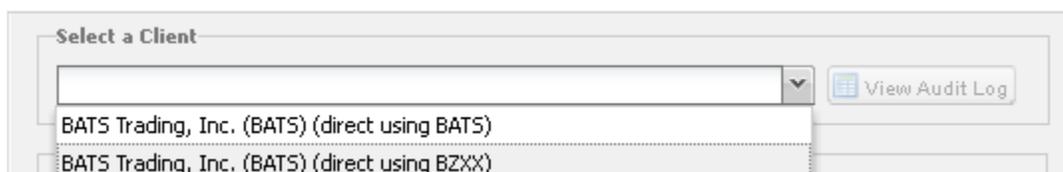
2.1.2 Service Bureau

In a Service Bureau relationship a customer allows its Trading Firm to be used on the ports of a technology provider, or Service Bureau. One Trading Firm may be allowed on several different Service

Bureaus. In these cases, a separate client relationship is created for each Trading Firm/Service Bureau combination. Note the example where the "BATS" Trading Firm is allowed on two separate service bureaus.
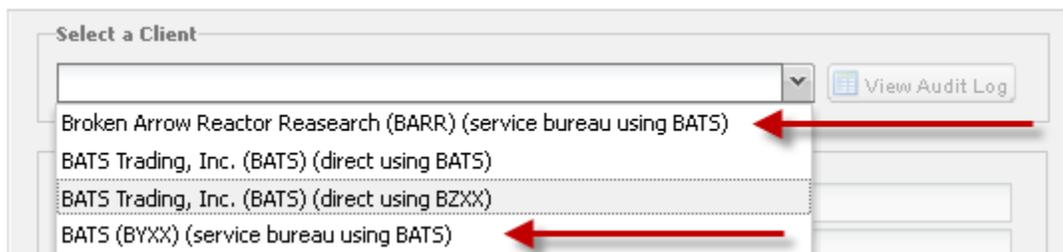
2.1.3 Sponsored Access

A Sponsored Access relationship consists of a Sponsoring Firm and a Sponsored Participant. The Sponsoring Firm is the Trading Firm owner and is the only entity in this relationship with access to the Web Portal Port Controls. The Sponsored Participant owns the ports, but has no ability to make changes to its port-level risk settings using the Web Portal Port Controls.
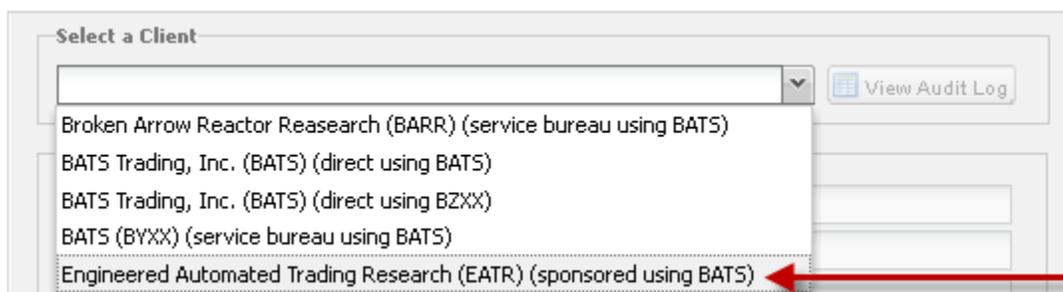
2.2 Restrictions

This section sets out the types of cut-off controls that can be performed on Sponsored Participants and other users of a Participant's trading identifier.

2.2.1 Block New Orders

Customers have the ability to block all new inbound order flow across all sessions by checking the corresponding box and saving the change. Customers will still be able to send cancel requests in for resting orders.

2.2.2 Block Trade Reports

Participants have the ability to prevent all new trade report flow from users/Sponsored Participants in real-time by checking the corresponding box and saving the change.

2.3   Maximum Per Order Limits

2.3.1   Max Quantity Per Order (Share or Contract Size)

This value is the max shares (Equities) or contracts (Derivatives) per order and is implemented consistently across all of a Participants current ports. When 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 Max Quantity Per Order is 100,000 for both Equities and Derivatives.

2.3.2   Port Order Rate Threshold

The Port Message Rate Threshold value is the maximum number of messages that can be sent on a single session in a rolling one second window, calculated from the time a non-heartbeat message is received. When the the value is exceeded, new orders will be rejected, modifies will be treated as cancels, and cancels will be queued up to be processed. The default value is 5000 messages per second.

2.3.3   Symbol Port Order Rate Threshold

The Symbol Message Rate Threshold value is the maximum number of messages that can be sent for a symbol on a single session in a rolling one second window, calculated from the time a non-heartbeat message is received. When the value is exceeded, new orders will be rejected, modifies will be treated as cancels, and cancels will continue to be processed. The default value is 5000 messages per second.

2.3.4   Order Collar Percentage

This controls the maximum percentage away from the Cboe reference price (see Cboe Participant Manual) that an execution is allowed to occur for a user/Sponsored Participant.

2.4   Trade Report Limits

2.4.1   Max Quantity Per Trade Report (Share or Contract Size)

This value is the max shares (Equities) or contracts (Derivatives) per order and is implemented consistently across all of a Participants current ports. When 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 Max Quantity Per Order is 100,000 for both Equities and Derivatives.

2.4.2   Max Number Of Trade Reports

When the specified number is exceeded the trade report is rejected.

2.4.3   Trade Size as a Percentage of ADT Warning Threshold

Cboe will monitor trade reports and report back to the user/Sponsored Participant when trade reports exceed a certain size threshold with respect to the ESMA defined Average Daily Turnover (ADT). This

control allows you to relax the threshold at which the surveillance warnings will be reported back to the user/Sponsored Participant.

2.5   Duplicative Order Protection (Equities Only)

Duplicative Order Protection provides Users with the ability to prevent duplicative orders where orders clearing the same trading identifier that have the same Side, Price, Quantity and Symbol that have been entered 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 on the port for the trading identifier will be rejected until an emailed request is submitted to the Trade Desk to reset the risk control on the port. 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. Duplicative Order Protection checks are only performed at the individual session level.

2.6   Permitted Markets (Equities Only)

This controls which symbols users/Sponsored Participants can trade based on their primary listing venue.

2.6.1   Maximum notional value per order per market (Equities Only)

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.

2.6.2   Maximum notional value per trade report per market (Equities Only)

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. On BXE, CXE and DXE there is a default limit of thirty million euros applied.

2.7   Daily Limits

2.7.1   Notional Daily Limits

This controls whether a user/Sponsored Participant should be restricted to only taking a certain level of risk (defined as executed notional value plus unexecuted notional value currently in the market) per day per port. If enabled during an active trading session, limits will not be effective until the next trading session. If disabled, all current settings are removed. It is also possible to configure and enable controls on a gross or net (absolute value of buys and sells) basis independently. With trade reports, there is a slight peculiarity worth being aware of. If the trade report is two sided and both sides of the report are

for the same Bank Code, then the gross notional value of the trade report is actually twice its nominal value (once for the buy leg and once for the sell leg) and there is no net impact (as the buy cancels the sell). Additionally, while unsolicited cancel/amends sent to 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) that originated the cancellation/amendment request.

2.7.2   Notional Cutoff Value

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

2.7.3   Market Orders Notional Cutoff Value

If using the Notional Value Cutoff, then by default, market orders (or midpoint trade reports) 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.

2.7.4   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:

```
GROSS risk = limit buy executed + limit buy exposed +
             limit sell executed + limit sell exposed
           = $5M + $2M + $3M + $1M
           = $11M
```

```
NET risk = ABS((limit buy executed + limit buy exposed) –
               (limit sell executed + limit sell exposed))
         = 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 a number of market sell orders are in the market. In this scenario:

```
GROSS risk = limit buy executed + limit buy exposed + market buy executed +
             limit sell executed + limit sell exposed + market sell executed
           = $5M + $2M + $1M + $3M + $1M + $2M
           = $14M
```

```
NET risk = ABS((limit buy executed + limit buy exposed + market buy executed) -
           (limit sell executed + limit sell exposed + market sell executed))
       = ABS(($5M + $2M + $1M) - ($3M + $1M + $2M))
       = $2M
```

2.7.5   Email Warnings

If desired, a User can specify a percentage point at which you can be notified by email if the user/Sponsored Participant exceeds that percentage of the Notional Value Cutoff, with a separate setting possible for exceeding a specified percentage of the Market Order Notional Value Cutoff. You can specify multiple email addresses to notify by inserting a comma between each address. Warnings can be configured for delivery on any combination of the user/Sponsored Participant passing the Gross Notional Value Limit, the Gross Market Order Limit, the Net Notional Value Limit and the Net Market Order Limit. 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.

2.8   Restricted Symbol List Management *(Equities Only)*

Customers have the capability to allow or restrict their ability to enter a security which is restricted due to insider holding status or any other mandated regulations defining its restricted status. Symbol lists are submitted via text file with one symbol per line and uploaded within the Web Portal Port Controls tool. A customer is also able to view the current list that is in place or clear the list entirely through this component. This is only applicable to Equities.

2.9   Cancel Orders or Trade Reports ("Kill Switch")

The following section demonstrates the types of cut-offs which can be performed using the Web Portal Port Controls. Note, a customer 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 in the **Restrictions** section of the page.

2.9.1   Cancel Open Orders

Customers have the ability to cancel all of their existing orders in real-time.

2.9.2   Cancel Any Pending Trade Reports

Participants have the ability to cancel users'/Sponsored Participants' pending trade reports in real-time.

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

Participants have the ability to cancel users'/Sponsored Participants' pending trade reports and open orders in real-time and additionally block any new orders and trade reports.

3 Requirements for Sponsored Access

3.1 Sponsoring Participants 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

3.2 Sponsored Participants 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

4 DROP Port Monitoring

Participants have the ability to 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.

4.1 Reject Orders on DROP port Disconnect

This features restricts order and trade report entry capability based on the connection status of specified DROP ports. The Cboe 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.

4.2 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.

4.3 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.

5   Automation

Automation of the Web Portal Port Controls is available through Secure Web API. Information on the implementation of the Secure Web API can be found [here](#).

6   Technical Details

6.1   Risk Minimisation

Ports operate with risk minimisation controls along with up to three different control paths:

- Port Owner: The port owner is able to set global defaults for risk settings or can tune on a port by port basis through the Cboe Trade Desk.
- Bank Code Owner: The firm legally responsible for the trading activity is able to store settings for all possible places where their bank code is used, whether that be on Direct ports, Service Bureau ports or Sponsored Access ports.

Should only one control path have a setting in place, that setting will be honoured directly. Should multiple control paths have settings in place, the setting that is regarded as the most risk averse will be applied.

6.2   FX Rates

Effective the 1st of January, 2016, 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.

6.3 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.

6.4 Limitations

This section outlines any specific limitations known to exist for these controls, which should be considered when choosing your limits

- ETR Matching and Tolerances: When using the ETR Matching service, it is possible to set a tolerance for overall consideration of the trade. For the non-reporting party, it is possible that the final trade consideration may differ from the reported consideration by a maximum of the specified tolerance. At the time of writing (for v1.6 of the Specification), the maximum allowed tolerance is 5,000 traded currency units. Notional value based risk controls are only considered against the reported consideration.

7 Support

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

Sales
SalesEurope@cboe.com
Phone: +44.207.012.8906

Cboe Trade Desk
TradeDeskEurope@cboe.com
Phone: +44.207.012.8902

Participant Services
ParticipantServicesEurope@cboe.com
Phone: +44.207.012.8902

8   Revision History

Document Version	Date	Description
5.21	18/02/2021	Added reference to Sponsored Access and clarification on Equities only risk controls in preparation for EU Derivatives
5.20	31/05/2019	Added DXE Environment
5.19	21/10/2016	Updated information on DROP port timeout and GCM implementation status
5.18	17/06/2016	Updated default notional limit for trade reports
5.17	19/02/2016	Updated for new branding
5.16	09/12/2015	Add detail about FX rates used
5.15	12/06/2015	Add detail about update frequency restriction for updating the restricted list.
5.14	24/03/2015	Add details about duplicative order protection
5.13	13/03/2015	Add details about cancellation of pending trade reports and information on default notional values
5.12	12/02/2015	Add support for configurable warning threshold for large trades.
5.11	18/10/2013	Add support for maximum daily number of trade reports
5.10	02/10/2013	Additional clarification around solicited cancellation/amendment requests and the Trade Reporting GUI.

9   Disclaimers

9.1   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.

9.2   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.

9.3   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.

9.4   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.