



Cboe Europe Derivatives

Risk Management Specification

Version 1.4

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1 Risk Management

1.1 Overview

The Cboe Risk Manager has been designed to assist Cboe Europe Derivatives Participants and Clearing Firms in managing the risk of over-executing . Unless stated, the controls below are applicable to both Futures and Options. Participants and Clearing Firms can design a risk profile that defines execution limits as a function of time or absolute limits per product type. These rules can be applied to unique Trading Firm Group Level, Trading Firm Level and Product Code(“Symbol”) (see section 1.2 below). When these limits are reached, additional executions will be prevented, outstanding orders/quotes will be cancelled, new orders/quotes rejected, and customers can control when they are willing to trade again.

Risk Profiles will apply to single leg orders and quotes, complex orders and block trades. When the Participant sets risk limit values, the most restrictive of the values settable by both Clearing Firm and Participant apply.

1.2 Risk Type Levels

- Product Code (“Symbol”) Level

All Risk Limit Types **except Rate Based Risk Trips and Absolute Risk Trips** are supported at the Product Code level and will be tracked separately for Futures vs Options products.

All symbol-level rules are based on the Product Code. The Product Code is defined as the underlying symbol as per the CEDX Products.

For example, a corporate action can result in multiple Symbols (a0000N, a0000X) while sharing the same underlying Product Code (EZ50F). Only a single symbol-level rule for underlying EZ50F would be necessary or allowed for a Future or Option product type.

- Trading Firm Level

Trading Firms or “Bank Codes” are assigned by Cboe Europe. Trading Firms specify the designated clearing relationship as well as the risk management setting that applies to an order/quote. Participants configure each port with one or more Trading Firms that are entitled to submit orders/quotes on that port (via Trade Desk). One Trading Firm can also be entitled to submit orders/quotes on multiple ports. The Risk Limits described in this document are specified and enforced strictly on the basis of Trading Firm, and are not related to individual ports. A firm may set a maximum number of symbol level events that can occur for the Trading Firm within a specified time frame. If that number of events by the Trading Firm across all

symbols occur within the set time frame, all orders for the Trading Firm will be canceled in all symbols. This excludes risk trip events, which count both symbol level and Trading Firm level risk trips.

- Trading Firm Group Level

A firm may set a maximum number of risk trip events that can occur for the firm across all Trading Firms in one or more arbitrary groups of Trading Firms. If the number of risk trip events across a group of Trading Firms meets or exceeds the limit set, all orders for all Trading Firms in the group will be canceled. A risk trip event occurs when any of the Risk Limit Types at the Product Code Level or Trading Firm Level reach their defined limits. **Clearing Firms will not be able to apply risk settings at a Trading Firm Group Level**

1.3 Risk Limit Types

Risk limits are defined by Trading Firm Group Level, Trading Firm Level and Product Code (“Symbol”) level. A collection of Risk Limit rules may be defined for each level. These rules work in conjunction until one of the limits is reached, at which point trading will stop, open orders/quotes will be cancelled, and any new orders/quotes received will be rejected. Both the cancel and the reject will carry a specific reason code that allows customers to identify whether an Trading Firm Group Level, Trading Firm Level or Product Code (“Symbol”) level or a risk lockout by CustomGroupID has occurred. In all cases FIX and BOE order entry protocols provide the ability to introspect the specific reason for an order/quote cancellation/rejection as follows:

BOE - `Order Cancelled` messages contain the *CancelReason* mandatory field and `Order Rejected` messages contain the *OrderRejectReason* mandatory field. These values reference a set of Reason Codes defined in the [CEDX BOE specification](#).

BOE Quote - `Quote Cancelled` messages contain the *CancelReason* mandatory field and `Quote Rejected` messages contain the *QuoteRejectReason* mandatory field. These values reference a set of Reason Codes defined in the [CEDX BOE specification](#).

FIX - An `Execution Report` message representing an order cancellation will contain *ExecType* (150) = ”4”. An `Execution Report` message representing an order rejection will contain *ExecType* (150) = ”8”. In both cases, the *Text* (58) field will encode the reason for cancellation or rejection comprising a reason code and formatted text as described in the Execution Report *Text* (58) field description in the [CEDX FIX Specification](#).

Risk Limit Type	Description	Access
<p>Rate Based Risk Trips</p> <p>Absolute Risk Trips</p>	<p>Risk Trips is computed as the sum of all Rate Based and Absolute Risk Limit Types for Notional, Volume, Count and Percentage of Quote risk trips.</p> <p>Rate Based Risk Trips behave similarly to Absolute Risk Trips with the exception that a time window is considered. For example, if a customer specifies a limit of five Risk Trips <u>per second</u> across Trading Firms ABCD and WXYZ, order/quote cancellation and rejection will occur following the fifth risk trip if within the same second.</p> <p>The Absolute Risk Trips behaves similarly to rate based risk trips with the exception that time is not considered. After X risk trips across effective Trading Firms has been reached, cancellations will be issued and rejects of new orders/quotes will occur.</p>	Participant
<p>Rate Based Notional</p> <p>Absolute Based Notional</p>	<p>Notional is computed as the sum of the products of premium multiplied by number of contracts. Full executions of all contracts for an order/quote will not be avoided to prevent exceeding notional rate limits. For example, if the customer's notional rate limit is €25 per second and 2 executions occur, one for 5 contracts at €3, and one for 7 contracts at €2, then the notional would be computed as:</p> $(5 * €3) + (7 * €2) = €29$ <p>Both executions will occur, followed by cancellations of pending orders/quotes and rejects of new orders/quotes.</p> <p>Rate based notional limits are defined by the two parameters <i>notional value</i> and <i>number of milliseconds</i>. Any time the notional value executed exceeds the notional value specified within the specified number of milliseconds, the limit is triggered.</p> <p>The Absolute Based notional behaves similarly to rate based notional limits with the exception that time is not considered. If X' Euros in notional have been executed the limit is reached. Cancels are issued and new orders/quotes are rejected until the customer has a chance to assess and decides to reset.</p>	Participant Clearing Firm (Absolute Only)
<p>Rate Based Volume</p> <p>Absolute Based Volume</p>	<p>Volume is computed as the sum of the number of contracts executed. When the total number of contracts executed exceeds the specified value within the specified number of milliseconds, the limit is triggered. Full execution of all contracts for an order/quote will not be avoided to prevent exceeding volume rate limit. For example, if a customer specifies a limit of 20 contracts per second and receives an execution for 10 contracts followed by a second execution for 15 contracts (10 + 15 = 25 contracts) within a single second, both executions will occur followed by cancellations of pending orders/quotes and rejects of new orders/quotes.</p> <p>Absolute Based Volume is similar to rate based volume with the exception that time is not considered. If X' contracts have been executed, the limit is reached. Cancels are issued and new</p>	Participant Clearing Firm (Absolute Only)

	orders/quotes are rejected until the customer has a chance to assess and decides to reset.																																				
Rate Based Count Absolute Based Count	<p>Count is computed as the number of executions. Premium and number of contracts have no bearing on this computation. If a customer specified a limit of 10 executions per second, the 10th execution within a single second will trigger the rate limit and prevent additional executions. Cancellations will be issued and rejects of new orders/quotes will occur.</p> <p>The Absolute Based count behaves similarly to rate based count limits with the exception that time is not considered. If X executions have been executed the limit is reached. Cancels are issued and new orders/quotes are rejected until the customer has a chance to assess and decides to reset.</p>	Participant																																			
Rate Percentage of Quote Absolute Percentage of Quote	<p><i>Percentage of Quote</i> is computed as the sum of the overall percentage of executions as a percentage of order/quote volume outstanding for each order/quote in a particular Product Code during the specified time period. Note that executions resulting from IOC orders will be included in the Percentage of Quote calculation.</p> <p>For example: An Options Exchange customer specifies a Percentage of Quote limit of 200% with four resting quotes in two different series quoted in a given Product Code (XYZ) for 100 contracts. Executions are ordered by time and include the aggregated Percentage Of Quote after each execution: Sell 80 XYZ1 – Trades with Quote 1 (<i>Total POQ = 80%</i>) Buy 50 XYZ1 – Trades with Quote 2 (<i>Total POQ = 130%</i>) Sell 60 XYZ2 – Trades with Quote 3 (<i>Total POQ = 190%</i>) Buy 10 XYZ2 – Trades with Quote 4 (<i>Total POQ = 200%</i>)</p> <table border="1"> <thead> <tr> <th>Series XYZ1</th> <th>Bid Size</th> <th>Offer Size</th> <th>Trade Size</th> <th>POQ</th> </tr> </thead> <tbody> <tr> <td>Order 1</td> <td>100</td> <td></td> <td>80</td> <td>80%</td> </tr> <tr> <td>Order 2</td> <td></td> <td>100</td> <td>50</td> <td>50%</td> </tr> <tr> <th>Series XYZ2</th> <th>Bid Size</th> <th>Offer Size</th> <th>Trade Size</th> <th>POQ</th> </tr> <tr> <td>Order 1</td> <td>100</td> <td></td> <td>60</td> <td>60%</td> </tr> <tr> <td>Order 2</td> <td></td> <td>100</td> <td>10</td> <td>10%</td> </tr> <tr> <td colspan="4"></td> <td>200%</td> </tr> </tbody> </table> <p>The Percentage of Quote is computed as: 80% + 50% + 60% + 10% = 200%</p> <p>The Absolute Percentage of Quote is similar to the rate based percentage of quote with the exception that time is not considered. If X percentage has been executed, the limit is reached. Cancels are issued and new orders/quotes are rejected until the customer has a chance to assess and decides to reset.</p>	Series XYZ1	Bid Size	Offer Size	Trade Size	POQ	Order 1	100		80	80%	Order 2		100	50	50%	Series XYZ2	Bid Size	Offer Size	Trade Size	POQ	Order 1	100		60	60%	Order 2		100	10	10%					200%	Participant
Series XYZ1	Bid Size	Offer Size	Trade Size	POQ																																	
Order 1	100		80	80%																																	
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Series XYZ2	Bid Size	Offer Size	Trade Size	POQ																																	
Order 1	100		60	60%																																	
Order 2		100	10	10%																																	
				200%																																	

1.3.1 Limit Execution Details

While these risk management tools are designed for and generally used for protection with regards to *posted* liquidity, the same risk configurations can impact the activity of remove. All Product Code level risk limits are checked in an atomic fashion inside each matching engine. As soon as a limit is breached, all resting orders and quotes in all series relating to that Product Code will be cancelled immediately.

The table that follows describes the different scenarios that may be encountered and should help participants to understand what to expect in the context of risk violations.

Risk Limit Type	Description																														
Rate Based & Absolute Notional	<p>Incoming orders/quotes may execute through your resting order/quote's risk limit <u>if the remaining limit is less than the total notional value of the order.</u></p> <p>Example: Suppose your limit is €1,000 per minute and you have currently executed €980. You have a single quote on the book for 3 contracts at €7. If this quote is hit, Cboe will execute all 3 contracts for a total notional executed of €1,001.</p>																														
Rate Based & Absolute Volume	<p>Incoming orders/quotes may execute through a resting order/quote's risk limit <u>if the remaining limit is less than the total quantity of an order.</u></p> <p>Example: Suppose your limit is 10 contracts while displaying a single quote for 15 contracts on book. An incoming order for 12 contracts executes with 12 of your 15 contracts and the remaining 3 contracts are cancelled back.</p>																														
Rate Based & Absolute Count	<p>If a customer specifies a limit of 10 trades, the 11th matched trade will not occur within the specified time interval.</p>																														
Rate Based & Absolute Percentage of Quote	<p>Incoming orders/quotes may execute through your resting order/quote's risk limit <u>if the remaining limit percentage is less than 100%.</u></p> <p>Example: Suppose your Percentage Of Quote limit is 200% per second. Four quotes are resting in a given Product Code (XYZ) with the following quote sizes and executions. Executions are ordered by time along with the aggregated Percentage Of Quote after each execution:</p> <p>Sell 80 XYZ1 – Trades with Quote 1 (POQ = 80%) Buy 50 XYZ1 – Trades with Quote 2 (POQ = 130%) Sell 60 XYZ2 – Trades with Quote 3 (POQ = 190%) Buy 100 XYZ2 – Trades with Quote 4 (POQ = 290%)</p> <table border="1" data-bbox="609 1648 1295 1896"> <thead> <tr> <th>Series XYZ1</th> <th>Bid Size</th> <th>Offer Size</th> <th>Trade Size</th> <th>POQ</th> </tr> </thead> <tbody> <tr> <td>Order 1</td> <td>100</td> <td></td> <td>80</td> <td>80%</td> </tr> <tr> <td>Order 2</td> <td></td> <td>100</td> <td>50</td> <td>50%</td> </tr> <tr> <th>Series XYZ2</th> <th>Bid Size</th> <th>Offer Size</th> <th>Trade Size</th> <th>POQ</th> </tr> <tr> <td>Order 1</td> <td>100</td> <td></td> <td>60</td> <td>60%</td> </tr> <tr> <td>Order 2</td> <td></td> <td>100</td> <td>100</td> <td>100%</td> </tr> </tbody> </table>	Series XYZ1	Bid Size	Offer Size	Trade Size	POQ	Order 1	100		80	80%	Order 2		100	50	50%	Series XYZ2	Bid Size	Offer Size	Trade Size	POQ	Order 1	100		60	60%	Order 2		100	100	100%
Series XYZ1	Bid Size	Offer Size	Trade Size	POQ																											
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Series XYZ2	Bid Size	Offer Size	Trade Size	POQ																											
Order 1	100		60	60%																											
Order 2		100	100	100%																											

290%

The *Percentage of Quote* is computed as:

$$80\% + 50\% + 60\% + 100\% = 290\%$$

All four trades in the given Product Code (XYZ) will execute, triggering risk, followed by a cancellation of all open orders/quotes in the given Product Code and rejecting new orders/quotes within the Product Code.

If there are any order modifications to quantity (up or down) or price, percentage of quote calculations having resulted in executions on the original order/quote will be retained and the modified order/quote will be treated as a new order/quote.

Example: A Participant specifies a Percentage of Quote limit of 200% with two (2) resting quotes in the given Product Code (XYZ) for 100 contracts, followed by a modify to Quote 1 to refresh quote size following an execution. Executions are ordered by time and include the aggregated Percentage Of Quote after each execution:

Sell 80 XYZ1 – Trades with Quote 1 (POQ = 80%)

Buy 50 XYZ1 – Trades with Quote 2 (POQ = 130%)

Modify Quote 1 – Increase size back to 100 (POQ = 130%)

Sell 100 XYZ1 – Trades with Quote 1B (POQ = 230%)

Series XYZ1	Bids Size	Offer Size	Trade Size	POQ
Order 1	100		80	80%
Order 2		100	50	50%
Order 1B	100		100	100%
				230%

The *Percentage of Quote* is computed as:

$$80\% + 50\% + 100\% = 230\%$$

1.3.2 Supported Order Types

All order types are supported. Any order or quote of any kind submitted to the Cboe Europe Derivatives Exchange that has been executed either fully or partially will decrement remaining values in a particular risk rule.

1.3.3 Block Trades

As per above, Block Trades will contribute to risk counters however they will only contribute to Notional, Volume and Count Rules. The update in risk counters will only take place upon confirmation. Participants should note that once a risk limit is tripped, resting orders and any pending block trades will also be cancelled which are applicable to the rule. In addition to this, Participants should note that any risk trip or self imposed order lockout will impact Block Trades which fall under that rule.

1.4 Certification

Cboe Europe Derivatives Participants and Clearing Firms must certify with the [Cboe Trade Desk](#) prior to using these Risk Management features.

1.5 Cancel, Rejects and Resets

When a resting order/quote or inbound order/quote is executed and a risk profile limit is reached or when a self-imposed lockout is received, resting orders/quotes are cancelled and inbound orders/quotes are rejected. In both cases the FIX and BOE *Text* field (58) will carry either a value of:

- s = Risk management symbol level
- + = Risk management Trading Firm Group level
- f = Risk management Trading Firm level

If the risk profile limit was reached, the FIX and BOE *SubreasonText* field (22058) will carry either a value of:

- f = Risk management Trading Firm level by rule
- s = Risk management symbol level by rule
- + = Risk management Trading Firm Group level by rule

If the customer initiated a Mass Cancel or Purge Lockout, the FIX and BOE *SubreasonText* field (22058) will carry either a value of:

- A = Purge/mass cancel Trading Firm level by user
- B = Purge/mass cancel symbol level by user
- D = Purge/mass cancel Custom Group ID level by user

When this is seen by a customer, it indicates that any order/quote still in flight, and any new orders/quotes issued, will be rejected. Once a customer has analyzed the situation and decides to

commence trading, they may clear the risk trigger or self-imposed lockout by either sending an order that has a special tag **OR**, if using BOE protocol, the customer may send the `Reset Risk` message. The tag is located in the BOE `RiskReset` field (7692). This field must be filled with one of the following values:

RiskReset Value	Product Code 'symbol' Reset	Trading Firm Level Reset	Trading Firm Group Level Reset	CustomGroupID Reset	Risk Counters Reset
'S'	Y	N	N	N	Y
'F'	N	Y	N	N	Y
'SF'	Y	Y	N	N	Y
'C'	N	N	N	Y	Y
*'G'	N	N	Y	N	Y
*'GS'	Y	N	Y	N	Y
'CS'	Y	N	N	Y	Y
'CSF'	Y	Y	N	Y	Y
'T'	Y	N	N	N	N
'E'	N	Y	N	N	N
'D'	N	N	N	Y	N
'H'	N	N	Y	N	N

When using the single characters the ordering of the characters does not matter. For example, a value of 'SF' is identical to a value of 'FS'. For more information on the `RiskReset` field, refer to the [CEDX BOE Specification](#) or the [CEDX FIX Specification](#).

Note that a reset will reset all active rules within the profile for the given Trading Firm Group Level, Trading Firm Level and Product Code ("Symbol") level. Individual rules cannot be reset on their own. The example that follows demonstrates this behavior.

Suppose that a customer has the following three rules in their profile for all contracts on UK1000:

1. 500 contracts per second Rate Based Volume limit
2. 20,000 contracts per minute Rate Based Volume limit
3. €100,000 Absolute Notional limit

Suppose that at a particular instant in time the current state of the rules is as follows:

1. 400 contracts have been executed in the active second
2. 19,000 contracts have been executed in the active minute
3. €25,000 of notional value has been executed.

Next, an inbound order from another participant is received that triggers an execution for 200 contracts against the customer owning the described risk profile. The participant owning the risk profile receives cancels for all remaining resting orders/quotes in UK1000 and their order handler will receive a cancel with a `Text` field reason of '**s: RiskMgmtSymLevel**'.

The participant owning the risk profile issues a reset. At this point in time, all rules are reset. This means that the active state for all three rules is set back to ZERO, including the Absolute Notional rule. The absolute value executed of €25,000 is lost and €100,000 is again available for execution.

the single character values 'T', 'E', 'D', and 'H' may also be used to clear the exchange or self-imposed lockout. These character values will release the lockout without resetting any counters related to the active risk rules. This may be useful for time based risk rules where the lockout may be released without resetting any risk counters being tracked back to zero.

The examples that follow demonstrate this behavior. For all examples below, assume firm has set the following risk limits:

1. 5 trades per 10,000ms in EZ500 series
2. 100 contracts per 10,000ms in EZ500 series

Example 1 – Self Imposed Lockout Initiated and Reset Sent without Counter Reset

- From 10:00:00 to 10:00:05 firm executes 3 trades totaling 50 contracts in EZ500 series.
- At 10:00:06 firm sends purge for EZ500 with lockout
- At 10:00:07 firm sends risk reset = "T" for EZ500
- Firm is allowed to continue sending quotes/orders.
- At 10:00:08 firm executes 2 trades in EZ500 series totaling 30 contracts.

Risk is tripped (rule 1) and all open orders/quotes are cancelled in EZ500 series.

Example 2 – Self Imposed Lockout Initiated and Reset Sent with Counter Reset

- From 10:00:00 to 10:00:05 firm executes 3 trades totaling 50 contracts in EZ500 series.
- At 10:00:06 firm sends purge for EZ500 with lockout
- At 10:00:07 firm sends risk reset = "S" for EZ500
- Firm is allowed to continue sending quotes/orders.
- At 10:00:08 firm executes 2 trades in EZ500 series totaling 30 contracts.

Risk is not tripped because counters were reset at 10:00:07.

Example 3 – Risk Tripped and Reset Sent without Counter Reset

- At 10:00:00 firm trips EZ500 symbol risk limit
- At 10:00:01 firm sends risk reset = "T" for EZ500

Firm is not reset since counters were not set back to zero and all new orders/quotes continue to be rejected.

Example 3 emphasizes that if risk was tripped causing a lockout and a risk reset is sent without counter reset, the lockout will remain in effect.

If a conflicting value is provided the risk reset with counter reset will take precedence. For example, “ST” will release any lockout and reset any applicable product-level rule counters to zero.

1.5.1 Risk Reset Limits

Only one unique risk reset of a given type (Trading Firm Group, Trading Firm, Product Code or CustomGroupID) is allowed per 100 milliseconds. Additional resets will be ignored. For example, a participant may reset risk for Trading Firm = ABCD and may not reset risk again for Trading Firm =ABCD until 100ms has elapsed. This restriction is designed to safeguard the trading platform from excessive risk messaging.

1.6 Ports and Risk Profiles

Risk management profiles are associated with Trading Firm IDs (bank codes) assigned by Cboe. If a customer desires a specific profile for a subset of ports, then it is up to that customer to use the proper value in FIX Tag 115 or BOE *ClearingFirm* field of their order.

That being said, the flexibility exists to allow for a customer to have two different profiles on a single port, multiple ports on a single profile, or one profile per port. Customers will have to design their profiles and work with the Cboe Trade Desk to activate the proper Trading Firm IDs on the desired ports.

1.7 Self-imposed Order Lockout (Participants Only)

Participants may initiate a self-imposed order/quote lockout in conjunction with a mass cancel or purge request for all resting and in-flight orders. Participants who issue mass cancel or purge requests using the *MassCancelInst* field (7700) may optionally configure a Lockout condition as part of the cancel operation.

A self-imposed order lockout may be issued on a BOE/FIX port at either the Trading Firm level or the Product Code level. Purge Ports support both of these and add the ability to impose a lockout for a *CustomGroupID* (7699). The self-imposed lockout can be released using the existing *RiskReset* field in BOE (7692).

1.8 Manual Firm-Level Risk Resets

Participants can optionally configure whether an Trading Firm Group level or Trading Firm level risk trigger can be reset automatically.

When Manual Resets are **disabled**, a customer will not be able to reset Trading Firm Group level or Trading Firm level risk via their FIX or BOE order entry sessions. Attempts to reset Trading Firm Group level or Trading Firm level risk over a FIX or BOE order entry session when sending *RiskReset* field (7692) containing “F” or “G” will result in a reject with a *Text* field reason of **"A: AutomaticRiskResetsDisabled"**.

Default behavior will be **disabled** which will require a participant to manually reset all Trading Firm Group level or Trading Firm level risk trips by contacting the Cboe Trade Desk (+44 207 012 8901). Changes to the default configuration can be submitted through the [Logical Port Request Form](#).

Product Code 'symbol' level risk resets will be unaffected by this configuration.

1.9 Clearing Firm-Level Risk Resets

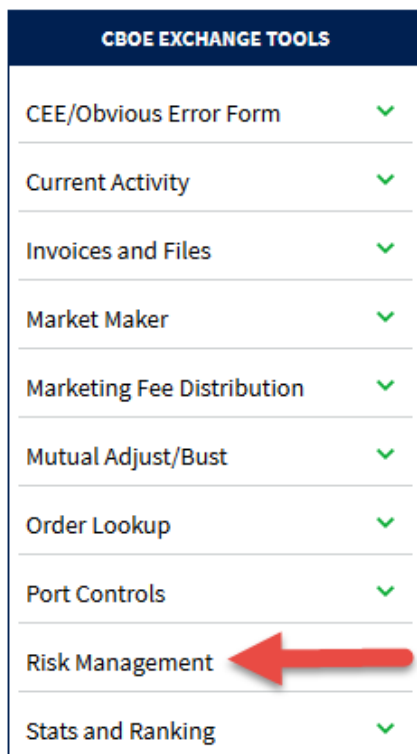
Clearing Firm Level Risk lockouts can **only** be reset by contacting the Cboe Trade Desk. Only the clearing firm owning the risk rule can ask the Trade Desk for a reset, individual participants will not be allowed to reset clearing firm level risk rules.

2 Risk Management Profile

Participants are provided the ability to upload risk profiles through the Customer Web Portal. The Web Portal is accessed through the public website at <https://markets.cboe.com/account/login/> . To be applicable for the current trading day, profile files must be uploaded prior to 07:00 UK Time. Profiles uploaded after this time will take effect the following trading day.

2.1 Customer Web Portal

Participants can request a login to the Customer Web Portal from their Firms Account Admin or the Cboe Trade Desk. After logging into their Customer Portal account, users with appropriate access will be able to select the **Risk Management** link under Exchange Tools in the lower left menu of their account page.



CBOE EXCHANGE TOOLS	
CEE/Obvious Error Form	✓
Current Activity	✓
Invoices and Files	✓
Market Maker	✓
Marketing Fee Distribution	✓
Mutual Adjust/Bust	✓
Order Lookup	✓
Port Controls	✓
Risk Management	✓
Stats and Ranking	✓

Selecting this link will take the user to the tool defined in Section “[Using the Risk Management Profile Tool](#)”.

2.2 File Format

The file format used for uploading a new profile or downloading a copy of an active file is identical. Each line of the file represents a rule containing a comma separated list of fields. The fields are described in the example that follows:

```
trading_firm_id, limit_type, product_code, limit_value, time_limit, currency,
product_type
```

- trading_firm_id - This field specifies the Trading Firm(s) to which the risk setting applies. **Specifying more than one Trading Firm per record is only compatible with a Limit Type of rate_trips or abs_trips**, and all Trading Firms must be included in a single rule using a pipe(|) delimited list. As discussed in the Ports and Profiles section, the Trading Firm value is assigned by Cboe that is passed through on every order in the 'onBehalfOf' field. The Trading Firm value controls the designated clearing relationship as well as the risk management profile that applies to this order.
- limit_type - The limit type is one of the following ten values:
 - rate_trips - A rate based risk trip count limit.
 - rate_ntnl - A rate based notional limit.
 - rate_vol - A rate based volume limit.
 - rate_count - A rate based count limit.
 - rate_pctqt - A rate based percentage of quote limit.
 - abs_trips - An absolute risk trip count limit.
 - abs_ntnl - An absolute notional limit.
 - abs_vol - An absolute volume limit.
 - abs_count - An absolute count limit.
 - abs_pctqt - An absolute percentage of quote limit.
- product_code - The product code for the series, such as 'EZ500'. Participants may optionally define default controls where explicit Product Code controls are not specified and an asterisk "*" is input in the place of a Product Code value. If a Product Code has one or more non-default risk rules of any type, then all specified default risk rules will not apply to that Product Code, even if the defined non-default rule type is different than the default rule type. For example, if the following risk rules are defined:

	A	B	C	D	E	F
1	BATS	rate_count	*	10	1000	F
2	BATS	rate_vol	ABC	100	1000	F
3	BATS	rate_pctqt	XYZ	500	500	F

The default rate_count rule will not apply to Product Code ABC or XYZ because they have a Product Code level rule defined. In order for a rate_count risk rule to be applied to ABC or XYZ you would need to add explicit, non-default rows for each. Product Code is not compatible with a Limit Type of rate_trips or abs_trips and Product Code should be left blank if either is specified.

- `limit_value` – This value must be an integer value. Floating point values are not accepted. When the limit type is a notional type, this represents whole currency units and does not support sub-decimal values. When the limit type is a volume type, this represents cumulative contracts traded in a Product Code. When the limit is a count type, this represents an execution count.
- `time_limit` – This field is ignored when the limit type is an absolute type. For rate types, this represents the number of milliseconds in the window. Values of less than 100 milliseconds will be treated as 100 milliseconds. In other words, the minimum time frame is 1/10th of a second.
- `currency` – This field is only valid for notional rules, if included for other limit types this will be ignored.
- `product_type` – This field is only applicable for firm level and root default rules. Supported values are: 'future', 'option' or 'any'. A `product_type` of 'any' will apply to both futures and options executions. If a `product_code` and `product_type` is provided the risk rule upload will be rejected.

2.3 Multiple Rules

Multiple Firm rules and multiple rules per Product Code are allowed. There is a limit of eight rules per Product Code per Trading Firm, and one Firm level rule per Risk Limit Type per Trading Firm. An example use of multiple rules is shown below.

A participant may decide that they are comfortable with a notional value of €100 per second. However, they are not comfortable with this rate as a sustainable long term rate. The five minute value that a customer is comfortable with may be €5,000 per five minutes. This rate is substantially slower than €100 per second. This combination of rules would allow for a maximum burst execution rate limit while maintaining a longer term control at a much lower rate. Finally, a participant may decide that in addition to these two rules, they never want a sum total of more than 10,000 executions without having a chance to analyze what's happening. A third rule, an absolute count rule, may also be introduced.

2.4 Participant vs. Clearing Firm Usage

The above specified file format is identical for usage by Participants and Clearing Firms. The manner in which risk settings are applied for both participants and clearing firms are as follows:

- Participants and Clearing Firms can update risk settings using multiple file uploads and a file upload can be used to selectively update risk settings for individual Trading Firms without affecting active risk settings for other Trading Firms.
- If a single value for an Trading Firm is updated in a file, users should take care to specify all values for the Trading Firm. Any value not specified for an Trading Firm will be zeroed out. **In other words, when specifying values for an Trading Firm, all values must be specified for that Trading Firm.**

- If a Clearing Firm attempts to set a Rate Limit, Risk Trips, Count or Percentage of Quote rule, which are available only to Participants, in any single record within an uploaded file, the upload will fail with the reason communicated back to the user.

2.5 Using the Risk Management Profile Tool

Profiles uploaded **after 07:00 UK time** will not be applied until the next trading day. A download of active rules will always be available. The screen below shows a sample of this configuration screen that is available through the Customer Web Portal.

Risk Management

CEDX

Use this tool to manage exchange risk settings. For more information, please refer to the [Risk Management Specification](#).

[Risk Settings](#) [Trading Firm Ids](#) [Notification Settings](#)

Download Risk File

Use this section to download **trading level** risk rules for your firm.

All Trading Firm Ids Current Trading Date [↓](#) Next Trading Date [↓](#)

Include CSV Headers

Upload Risk File

Use this section to upload **trading level** risk rules for your firm.

Choose a file or drag and drop

Risk settings uploaded after 6:30am London will be applied to the next trading day.

 [Example Upload CSV](#) [↓](#) [View Upload History](#)

Clear Risk Rules

Use this section to expire the **trading level** risk rules for the selected Trading Firm Id(s) at the start of the next trading session.

Select...

Prior to the cutoff time the upload section will apply to current day. Uploads after the cutoff time will be applied to the next trading day. Note that no dates are contained in the file and you cannot stage future profiles beyond the next trading session. You can only replace the active profile with a new one for the next trading session. Once a profile is activated, it stays active permanently until a new profile is loaded.

The risk management interface for Participants enables risk settings to be provisioned on an Trading Firm-by-Trading Firm basis. Risk settings can be downloaded and uploaded for individual Trading Firm while leaving other Trading Firms unaffected. This functionality is also offered to Clearing Firms.

3 Contact Details

If you have any questions or would like to begin using Risk Management, please contact your account manager or any of the teams below:

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Revision History

Document Version	Date	Description
1.4	26/04/21	Added wording around Block Trades and clarification around Clearing Firm rules.
1.3	25/03/21	Additional clarity regarding rate and absolute risk trips
1.2	23/03/21	Removal of group-enabled interface for Clearing Firms Risk Reset limit of 1 per 100ms clarified
1.1	12/03/21	Removed wording that clearing firms will be required to set risk limits prior to go-live and minor formatting amendments
1.0	28/01/21	Initial Version