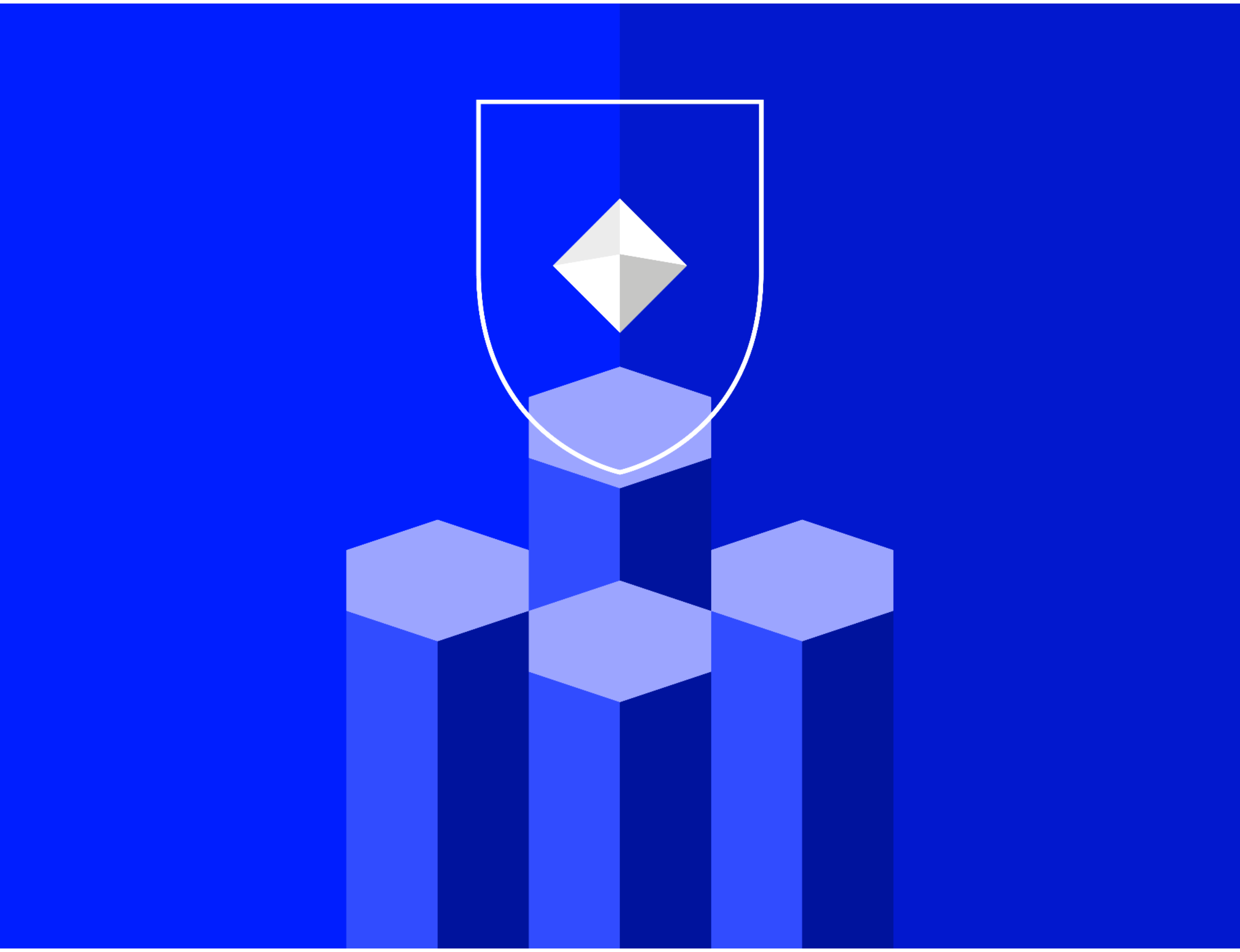
TECHNICAL DESCRIPTION

Exchange Level Controls with Enhanced Pre-Trade Risk Controls

Version 1.2

20 January 2021



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Contents

1 Revision History

History of changes		
28/08/2020	1.0	Initial version.
11/09/2020	1.1	Sections 4.6 (and subsections) and 6.2 updated to reflect correct use of Risk Controller and Risk Monitored User.
20/01/2021	1.2	Section 2 updated with new terms. Sections 6 and 7 added for the new Enhanced Pre-Trade Risk Controls

2 Glossary

Term	Definition
ADT	Average Daily Turnover
CGC	Current Gross Consideration – ongoing sum of open exposure, Orders and executed Trades per user per day
ELC	Exchange Level Controls
EPTRC	Enhanced Pre-Trade Risk Controls
FTP	File Transfer Protocol
GCM	General Clearing Member
ICM	Individual Clearing Member
MGC	Maximum Gross Consideration – maximum allowed sum of open exposure, Orders and executed Trades per user per day
MOV	Maximum Order Value
RIL	Restricted Instrument List
Risk Controller	A user who manages Exchange Level Controls and/or Enhanced Pre-Trade Risk Controls for trading users
RFQ	Request for Quote – A Quote request submitted by a requester
RFQ Quote	The message sent by a Market Maker when responding to and RFQ
RFQ Quote Response	The response that the requester sends to the market maker confirming acceptance of their Quote

3 Introduction

London Stock Exchange optional Exchange Level Controls (ELC) with Enhanced Pre-Trade Risk Controls (EPTRC) are designed to manage risk for trading users.

ELC and EPTRC are managed by the Exchange or via the Risk Monitoring Portal, which allows the Risk Controller to set and manage limits at the user level (single connection) for ELC, whilst with EPTRC limits are managed at a more granular level taking into account clearing setup.

The Risk Controller can be a General Clearing Member (GCM) or Member Firm. Member Firms who are not their own Risk Controller can request a read only version of the Risk Monitoring Portal should they require.

ELC and EPTRC consist of real-time gateway level validations. Alerts can be sent when configured limits are breached. Users can also monitor risk exposure in real time via the Risk Monitoring Portal, where a kill switch is also available, in addition to being available via the FIX Drop Copy Gateway. A file upload facility will also be available for setting EPTRC limits.

The objective of this document is to provide an overview of the; ELC, EPTRC, Drop Copy Gateway and the Risk Monitoring Portal.

Sponsored Access trading services are not supported for GCMs.

4 Exchange Level Controls

ELC are optional and are managed by the Exchange or via the Risk Monitoring Portal, which allows the Risk Controller to set and manage limits at the user level single connection i.e., FIX Comp ID and/or Native User ID.

Exchange Level Controls (order validation checks), are applied to all Orders submitted, in order to restrict and prevent trading beyond certain limits.

All Orders submitted via a Risk Monitored User will pass through the Exchange Level Controls before reaching the Order Book. This validation is specific to Orders from Risk Monitored Users and is in addition to the standard checks in place on London Stock Exchange, which are implemented and enforced for all Participants.

4.1 Reference Price Collars

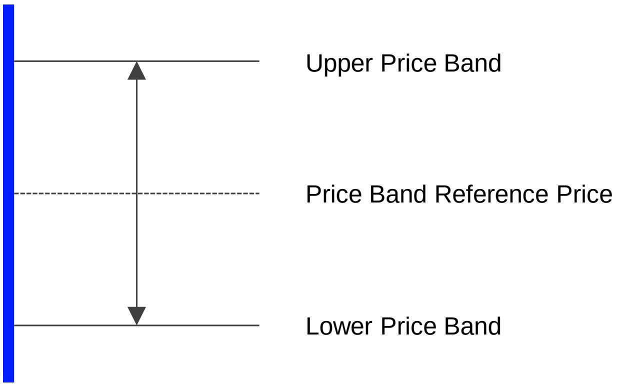
Reference Price Collars prevent Orders with an overly aggressive limit price from entering the Order Book and trading.

London Stock Exchange currently operates a one-way band limit depending on whether the incoming priced Member Firm Order is a buy or a sell. The ruling limit is set at Trading Parameter level and is defined as a percentage offset, computed against the reference price of the last traded price or the previous day's closing price when the stock has not yet generated an Order book trade that day.

The following Orders will be **rejected** on entry:

- Buy Orders with a limit price equal to or greater than the upper price band limit (reference price + price band offset)
- Sell Orders with a limit price equal to or less than the lower price band limit (reference price – price band offset)
- All unpriced Orders.

Reference Price Collars are in addition to the standard London Stock Exchange dynamic and static circuit breakers, which Member Firm Orders cannot invoke.



During Regular Trading, to prevent a circuit breaker being invoked, the Reference Price Collar is set 1 basis point less than the ruling ***Dynamic Price Monitoring*** % for that instrument. To give more flexibility during auction call phases the ruling Reference Price Collar is doubled from that in place for Regular Trading. The ***Dynamic Price Monitoring*** % can be found for each trading sector on the 3rd tab of ***Millennium Exchange and TRADEcho Business Parameters***.

4.2 Maximum Order Value

The Maximum Order Value limit prevents Orders with uncommonly large values from entering the Order Book(s). Max Order Value is set at Exchange level, see Parameters.

The Max Order Value can be set per Risk Monitored User, in a base currency. A currency conversion rate is applied to the traded currency of the Order to give the value in the correct base currency. For more information, please refer to section 4.10 Currency Conversion.

All Orders entered by the Risk Monitored Member will be validated against the Maximum Order Value set for the Risk Monitored Member. If the Order value (price x Order size) is greater than the Maximum Order Value, the Order will be rejected.

The same logic will also be applied for Order amendments. If the new Order value (new price x new Order size) in the Order amend request is greater than the Maximum Order Value set for the user, the request will be rejected.

4.3 Maximum Order Quantity

The Maximum Order Quantity limit prevents orders with an uncommonly large order quantity from entering the Order Book(s).

The limit is set at the individual instrument level and is applicable to all Users (specified as a number of shares).

The current limit is set for a maximum of 5,000,000 shares per instrument and per Order.

4.4 Maximum Gross Consideration

The Maximum Gross Consideration limit prevents Risk Monitored Users from trading beyond a financial limit set by the Risk Controller. If a Risk Monitored User attempts to submit an Order which would result in the Current Gross Consideration exceeding the configured Maximum Gross Consideration, the Order will be rejected.

Current Gross Consideration (exposure) is defined as the sum of all Trades and value of all open Orders. Example:

Current Gross Consideration	**=**	**Consideration of all Trades during day** **+** **Value of all open Orders**

The value is configured per Risk Monitored User for a trading day, in a base currency for the Risk Monitored User. FX conversion will be carried out based on the trading currency of the instrument. For more information, please refer to section 4.10 Currency Conversion.

The value is calculated as a cumulative value, i.e., A buy or sell Order will be added to the overall Gross consideration and no netting of buy and sell positions will take place.

For example, a buy Order in Vodafone of 500 shares at 100p followed by a sell Order of 500 shares at 100p, will increase the overall Current Gross Consideration by 100,000p (compared with a net exposure position in Vodafone of 0).

All Risk Control Members must set a Maximum Gross Consideration limit for each of their Risk Monitored Users (and can be set at an individual Risk Monitored User level). If this is not defined (i.e., set to 0), the Risk Monitored User will not be able to trade as no limit is applied. This value can be either increased or decreased intra-day via the Risk Monitoring Portal.

4.4.1 Maximum Gross Consideration Alerting via Risk Monitoring Portal and email

Risk Controllers are able to receive advance warnings to alert them about their Risk Monitored User's Order and trading activity in relation to their Max Gross Consideration limit via the Risk Monitoring Portal and via email (to an email group) when their Risk Monitored Users breach set limits.

Alerts are sent when a limit is breached for a Risk Monitored User and when a Risk Monitored User's Order is rejected due to an attempt to breach their Max Gross Consideration limit.

E.g. When 50%, 75%, 90% and 100% of the Risk Monitored User's Max Gross Consideration is breached.

For Example:

A Risk Monitored User has a Max Gross Consideration of 100,000 euros. An alert has been set up to warn the Risk Controller (via the Risk Monitoring Portal and email) when the Risk Monitored User's Order and Trade Consideration breaches 75% of their Max Gross Consideration limit.

E.g. When the Risk Monitored User's Current Gross Consideration exceeds 75,000 euros.

Where multiple limits are breached by a single Order, only the alert for the highest limit will be sent. An alert will only be sent once during any given day, unless the Risk Monitored User's Max Gross Consideration is updated

Risk Controllers can request to receive alerts via the Member Portal.

Once set up, Risk Controllers will be able to maintain their alert limits for their Risk Monitored Users via the Risk Monitoring Portal.

4.5 Maximum Message Rate

Risk Controllers will be required to apportion a maximum message rate limit in order to prevent Risk Monitored Users from entering an overly large number of messages. The limit will be set as a maximum number of messages per second per Risk Monitored Users and will be allocated from the total limit allowed for the Risk Controllers allocation.

4.6 Restricted Instrument Lists (RIL)

A Restricted Instrument List (RIL) allows the Risk Controller to restrict Orders entered by a Risk Monitored user to a limited set of instruments, in the form of a negative permission list(s) (set for an individual Risk Monitored User), i.e., the RIL is the list of instruments the Risk Monitored User **cannot** trade. If a Risk Monitored User attempts to submit an Order in a restricted instrument, it will be rejected.

Lists are created (following notification from the Risk Controller) by London Stock Exchange's Market Operations team (MOPS).

Restricted Instruments on each list are maintained by the Risk Controller by uploading a .csv file:

- via SFTP
- or via the Risk Controls Portal.

In situations where access to SFTP or the Risk Controls Portal is not possible, the Exchange's Market Operations (MOPS) team can assist;

- Risk Controller must submit a request to the Exchange's MOPS for changes to the RIL of Risk Monitored Users. Please refer to Section 6.1 for further information.
- Where an instrument becomes restricted intraday by MOPS, the Exchange will cancel any open Orders of the Risk Monitored User in the restricted instrument. Until the Exchange cancels all open Orders, a Risk Monitored User will continue to be able to amend any open Orders on restricted instruments.

4.6.1 Updating a Restricted Instrument List (RIL) via SFTP

Risk Controllers that that would like to update their restricted lists using a .csv file would need to apply for an LSE managed SFTP account. This can be requested via the Technical Account Management Team (londontam@lseg.com).

Once the SFTP account has been set up and the Restricted Instrument List shell(s) have been created, Risk Controllers can upload (intraday) .csv files to add or remove Instruments from a particular Restricted List. Any intraday uploads to the Restricted Instrument list will be made active within 5 minutes.

Please note that when a new list is uploaded, into the SFTP site, existing Orders in the affected instruments will not be automatically deleted and firms should arrange for existing Orders to be deleted. Until such open Orders are deleted, a Risk Monitored User will continue to be able to amend any open Orders on restricted instruments.

The SFTP server will be available for file processing from 06:00 to 17:30 (UK Time) during trading days. An authentication error will occur if an attempt to log on to the SFTP server is made outside these hours. Any files submitted outside of these hours will receive no acknowledgement response and any files inside portal gateway folder will be deleted when Exchange restarts.

The SFTP/FTP will have the following directories:

Directories	Description
Outgoing	This is where users can see what happened to every file (with a correct name and valid size) that they asked the Exchange to process
Incoming	The is where users can upload Restricted list .csv files.

The uploaded.csv file must adopt the following characteristics:

- The file must have the following naming convention:
  - The Restricted List name will be provided by the Exchange and must be used in the file name submitted within the file itself.
  - The file must have the following naming convention and be unique for a given business day. [RestrictedListName]_[YYYYMMDDHHMMSS].csv
- The file must not exceed a size of 200KB
- The file should contain a list of all the instruments that the Risk Monitored User cannot trade, with a maximum limit of 100 instruments
- The Instrument ID must be used to identify the restricted instruments
- The .csv file should be comma delimited. The first row of the file must use the following format:

  <[RestrictedListName]>, <Instrument ID A>, <Instrument ID B>

If a file is uploaded and does not meet initial required validation on the file name, the file will be transferred to/Outgoing prefixed with INVALIDNAME_

The initial validation is the filename must be prefixed matching part of the username.

Please note that:

- In case an erroneous Instrument ID is indicated, the file will be entirely rejected.
- Files with a date different from the current date in their filename will not be processed.
- To add an instrument, you would add it to the list of instruments previously submitted.
- To remove an instrument, you would delete it from the list of instruments previously submitted.
- It is not possible to update more than one Restricted List with a single file upload.
- Up to 10 attempts can be made to update each Restricted List per day.
- Uploading a file with no underscores present in the filenames will result in failure.

Upon **successful** processing of an incoming file, the Risk Controller will receive:

- a response file with the same name of the uploaded file and an ".ok" file extension into the "Outgoing" directory.
- the successfully processed file stored in the "Incoming" directory.

Upon **partially** successful processing of a file, the Risk Controller will receive:

- a response file with the same name of the uploaded file and an ".ok" file extension to the "Outgoing" directory. This file will contain the list of instruments which were successfully processed and a warning message "One or more entry uploads have failed".
- a response file with the same name of the uploaded file and an ".err" file extension to the "Outgoing" directory. The file will contain a list of instruments which were unsuccessful, along with the reasons for failure.
- The successfully processed file stored in the "Incoming" directory.

Upon **unsuccessful** processing of a file, the Risk Controller will either:

- be provided no results (i.e. not provide an error file) in case –
  - the file has been named with an incorrect Restricted List name prefix.
  - the file exceeds the maximum permitted size.
  - On the second error where a firm has already exceeded their 10 attempts i.e., on the 12th attempt.

- be provided a file with the same name of the uploaded file and an ".err" file extension to the "Outgoing" directory. Where a filename is not unique, a timestamp will be added to the ".err" extension to make it unique
  - e.g., LSE_ABCTRADING_RL16_20180124060004.err_201812111503
  - The file will contain the original contents provided on line 1 and an error code and description on line 2. The error code provided will be the first error detected

Note: Response files sent to the "Outgoing" directory and Restricted List.csv files uploaded in the "Incoming" directory will be stored for 7 days. After 7 days the files will be purged.

The following table summarises the errors that can be provided.

Error Code	Scenario Description	Reason for error
0001	The File cannot be processed (due to incorrect file format or corrupt file)	File cannot be processed
0002	Incorrect or non-existing Restricted Instrument List	Restricted instrument List Shell/group not found
0003	Invalid Instrument/Instrument does not exist	Instrument(s) not found
0004	A Restricted Instrument List update failed due to Exchange Manager having terminated or the file update failed because Exchange Manager was in the process of failing over	System Unavailable
0005	File contains Instruments which are already added through an Expression	File contains expression based Instrument(s)
0006	The file name is the same as the previously uploaded file or The file name's timestamp is older than that of the previously processed file with the same Instrument Group	Outdated file
0007	The file's content is same as the previously uploaded file for the same Instrument Group	No update from previous file
0008	An Instrument Group update is rejected by Exchange due to EOD process not being completed	Update rejected by System
0009	Upload (N+1)th file when Max_RIL_Updates = N	The maximum number of Restricted List updates has been exceeded for the day. No further updates will be accepted or .err files provided
0010	Max Instruments per Group exceeded	The maximum number of Instruments within the file has been exceeded
0011	Instrument Group specified in the file does not match the Instrument Group specified in the file name	The Instrument Group Name in the File Name does not match the Instrument Group Name within the file
0012	Duplicate file is uploaded before the gateway processes the initial file	The file is a duplicate
0013	System error is encountered while processing	File cannot be processed due to system error

4.6.2 Updating a Restricted Instrument List via the Risk Monitoring Portal

Risk Controllers can update their Restricted Lists (intra or inter-day) using a .csv file or they can do so via the Risk Monitoring Portal.

For characteristics and format requirements of the .csv file, please refer to the relevant part of Section 4.6.1 Updating a Restricted Instrument List via SFTP.

Once the Restricted List shell has been created via the Member Portal and assigned to the Risk Monitoring User (or Users) by London Stock Exchange MOPS, and such Risk Monitoring User has been enabled with the appropriate privilege by London Stock Exchange MOPS, the Risk Controller can browse and upload a single .csv file every 20 seconds to add or remove Instruments from a particular Restricted List.

Please note that when a new list is uploaded via the Risk Monitoring Portal, existing Orders in the affected instruments will not be automatically deleted and firms should arrange for existing Orders to be deleted themselves. Until such open Orders are deleted, a Risk Monitored User will continue to be able to amend any open Orders on restricted instruments.

The Risk Monitoring Portal will carry out some basic validations before attempting to upload a file. When validations fail, a pop-up message will be displayed in the Risk Monitoring Portal with one of the following reject messages:

Scenario	Reject Message
File size is too large for the framework to process (in the megabyte range)	The file upload failed.
File name length is more 49 characters	File name is too long.
Invalid file type (Only .csv files are allowed.)	An invalid file type.
File content longer than 4000 characters	File content is too long.
File contains data in multiple lines. File can contain data in only one line.	File contains data in multiple lines
Another file exists with the same file name.	Duplicate file name.

As per Section 4.6.1 Updating a Restricted Instrument List via SFTP, Risk Controllers can expect to receive the same .ok and .err files, as appropriate for the ***successful, partially successful*** and ***unsuccessful*** processing of Restricted Instrument Lists uploaded via the Risk Monitoring Portal, “Remarks” column (see table below).

Once a file has been uploaded, the system will indicate the request is being processed in the Risk Monitoring Portal and have the status of ‘Processing’. Once processed, the “Status” of the file uploaded will be updated.

The following table provides a complete set of Risk Monitoring Portal “Status”, descriptions and “Remarks” provided:

Status	Description	Remarks
Processing	The file has successfully passed the basic validations and has been uploaded ready for the processing.	n/a
Partially successful	The file has been uploaded and one or more entries have been processed successfully.	For “Partially Successful” processed files, the remark column will state: **“One/or more entry uploads have failed.”** By clicking on the download links, users can download the .ok. and .err. files.
Successful	The file upload has been successfully processed.	By clicking on the download links, users can download the .ok. file.
System unavailable	The file upload request has been in a “Processing” state for longer than 30 seconds.	n/a

Status	Description	Remarks
Failed	The file upload has been rejected due to one of the reasons that follows in the Error Code table below.	For "Failed" processed files which generate a single error code, the remark column will state: **"Error Information: <Description>"** For "Failed" processed files which generate multiple error codes, the remark column will state: **"File processing failed due to multiple errors."** By clicking on the download links, users can download the .err. file.

The following table summarises all of the errors that can be provided:

Error Code	Description	Reason for error	Example entry on .err file and 'Remarks' column
0001	File cannot be processed	File is not formatted correctly or file is corrupt	0001, File cannot be processed
0002	Instrument Group not found	Restricted list does not exist or is incorrect	0002, Instrument group not found, Inst_Grp_x
0003	Instrument not found	Instrument provided is invalid	0003, Instrument not found, Inst_Grp_1, Inst_x
0004	System unavailable	There was an error processing the file or the file has taken longer than 30 seconds to process	0004, System unavailable
0005	File contains expression based Instrument(s)	There is an issue in the way the Restricted List has been set up, as a query has been used MOPS will need to be contacted to resolve this issue	0005, File contains expression based instrument(s), Inst_Grp_1, Inst_x
0006	Out-dated file	File has an out of date timestamp	0006, Out-dated file
0007	No update from previous file	File has not changed	0007, No update from previous file
0008	Update Rejected by System	There was an error in processing the file	0008, Update rejected by System
0009	Max Instrument Group Updates Exceeded	The maximum number of Restricted List updates has been exceeded for the day. No further updates will be accepted or .err files provided	0009, Max instrument group updates exceeded, InstGrp_20111103035100
0010	Max Instruments per group Exceeded	The maximum number of Instruments within the file have been exceeded	0010, Max instruments per group exceeded
0011	Instrument Group does not match File Name	The Instrument Group Name in the File Name, does not match the Instrument Group Name within the file	0011, Instrument group does not match file name
0012	Duplicate file	The file is a duplicate	0012, Duplicate file
0013	File cannot be processed due to system error	The file cannot be processed due to a system error	0013, File cannot be processed due to system error

4.7 FIX Drop Copy Gateway

Member Firms, who are not their own Risk Controller, can consent to provide their GCM a FIX Drop Copy Gateway connection under their own Firm ID or under the GCM's Firm ID, such that they receive all of the relevant Execution Reports from a Member's Native and/or FIX Trading Gateway connection.

FIX Drop Copy Gateways can be set up with Exchange Level Controls. Alternatively, they can also be set up without Exchange Level Controls being configured.

For further information on the FIX Drop Copy Gateway, see MIT 205 Drop Copy Gateway (FIX 5.0), available in the Technical Library.

a) Cancel on Disconnect

A cancel on disconnect and cancel on logout facility is available.

All Risk Monitored User's Orders will be deleted from the Order Book automatically under the following circumstances:

a) Risk Controller disconnects from the Drop Copy gateway for a longer than a pre-configured time, resulting in the suspension of trading services for all associated Risk Monitored Users (e.g., Submitting Orders).

b) Risk Monitored User disconnects from the Order Book for a longer than agreed pre-configured time.

If this functionality is enabled, Risk Monitoring Firms and Users will need to prove via our test environment that they are able to receive and interpret these messages.

4.8 Kill Switch (Suspension and Reactivation)

A Kill Switch is available to Risk Controllers to "Suspend" a selected Risk Monitoring User. It can be activated manually via the Risk Monitoring Portal or automatically via sending a message via the Drop Copy Gateway.

All Risk Monitoring User's Orders will be deleted from the Order Book automatically under the following circumstances:

a) Risk Controller activates the Kill Switch for a given Risk Monitoring User from the Risk Monitoring Portal. Note: Only available for Risk Monitored users using the Native protocol.

b) Risk Controller activates the Kill Switch for a given Risk Monitoring User via the Drop Copy Gateway. Available for Risk Monitored users using either FIX or Native Protocol.

Risk Monitoring Users can also:

- "Activate" Risk Monitored Users to allow them to resubmit Orders via the Risk Monitoring Portal or via the Drop Copy Gateway.
- See the "Status" of their Risk Monitored Users via the Risk Monitoring Portal or request the "Status" of a Risk Monitored User via the Drop Copy Gateway.

If the Kill Switch functionality is required, Risk Controllers will need to prove via our test environment that they are able to send, receive and interpret Kill Switch messages (suspend, activate, and status) via the Drop Copy Gateway.

For further information on the FIX Drop Copy Gateway, see MIT 205 Drop Copy Gateway (FIX 5.0), available in the Technical Library.

4.9 Rejecting Unpriced and Pegged Orders

All Orders entered without a limit price (e.g., Market Orders) and all pegged Orders (with or without a limit price) entered by Risk Monitored Users will be rejected.

This validation check is system wide for all Risk Monitored Users and is applied as a validation check when Market Orders are submitted to the Order Books.

4.10 Currency Conversion

All ELC nominal validation limits (Maximum Order Value and Maximum Gross Consideration) are specified in a base currency for the Risk Monitored User. All Orders submitted will be converted from the traded currency to the base currency before these limits are applied. The exchange rates for this currency conversion are obtained from the European Central Bank and maintained by London Stock Exchange via a daily file upload.

There will be five base currencies as per the example below:

Trading Currency	Base Currency	Value
SEK	EUR	9.3404
GBP	USD	0.8311
NOK	GBX	0.079809
USD	YEN	1.2767
HKD	GBP	11.567

4.11 Exchange Level Controls Parameters Summary

As described above, ELC limits are set either at an instrument group level (to be applicable to all Risk Monitored Users), or at a Risk Controller specific level, or as checks imposed on Risk Monitored Users at system level by London Stock Exchange.

We have also included more information on the validations that are able to be controlled via the Risk Monitoring Portal. This is summarised below:

	User	Instrument/Instrument Group	System	Amended via Risk Monitoring Portal	Supported by FIX and/or Native Trading Gateways
Price Band Validation		X			NATIVE
Max Order Value	X		X		NATIVE
Max Order Quantity		X	X		NATIVE
Max Gross Consideration	X			X	NATIVE
Max Message Rate	X		X		NATIVE & FIX
Restricted Instrument List	X				NATIVE & FIX
FIX Drop Copy **Includes Cancel on Disconnect**	X				NATIVE & FIX
Kill Switch (Risk Monitoring Portal)	X			X	NATIVE
Kill Switch (via FIX Drop Copy)	X				NATIVE & FIX
Reject Unpriced Order			X		NATIVE

5 Risk Monitoring Portal

The Risk Monitoring Portal is a secure web-based GUI tool accessed via a secure login (accessible via LSEG infrastructure), which allows Risk Controllers to monitor trading activities and amend limits of their Monitored Users.

ELC features supported in the Risk Monitoring Portal include:

- Amend Max Gross Consideration
- View Current Gross Consideration
- View and Amend Max Gross Consideration Alerts
- Upload Restricted Lists via csv file
- Invoke the Kill Switch

Access to the Risk Monitoring Portal will require the use of LSEG provided RSA soft tokens. These will be provided as part of the enablement process.

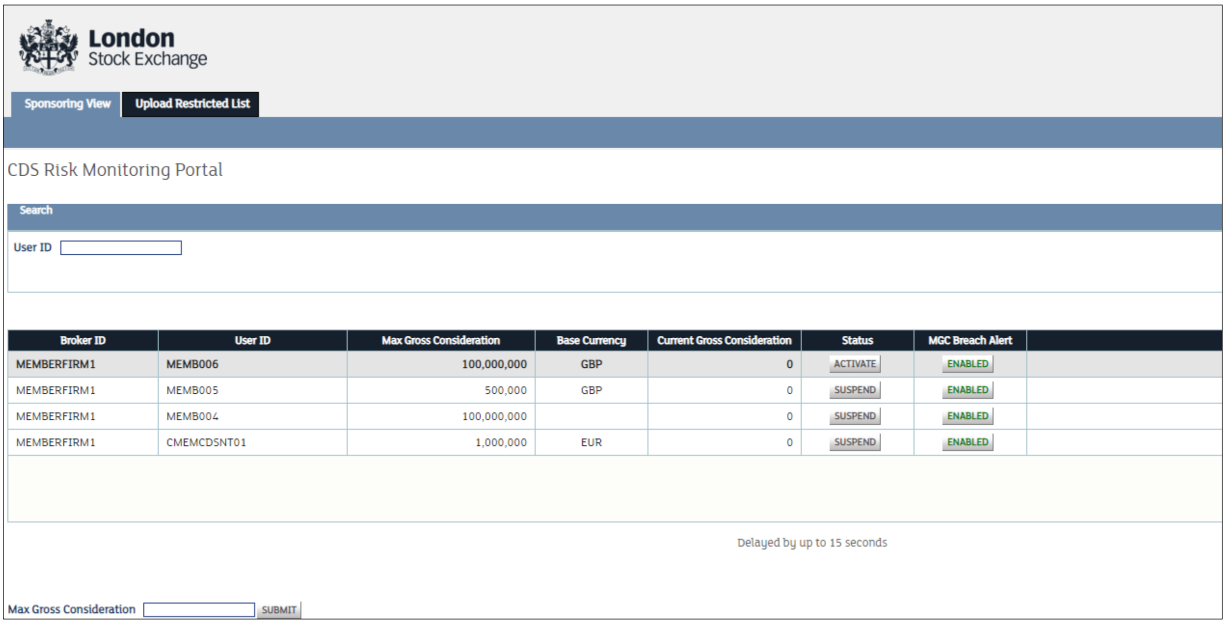
The Risk Monitoring Portal is available from 03:00 to 18:15 (UK time).

5.1 Risk Controller view

a) Sponsoring View

Once the Risk Controller logs into the Risk Monitoring Portal, the ‘Sponsoring View’ window will be displayed. It will show the summary of ELC information for the Trading Sessions you are monitoring:

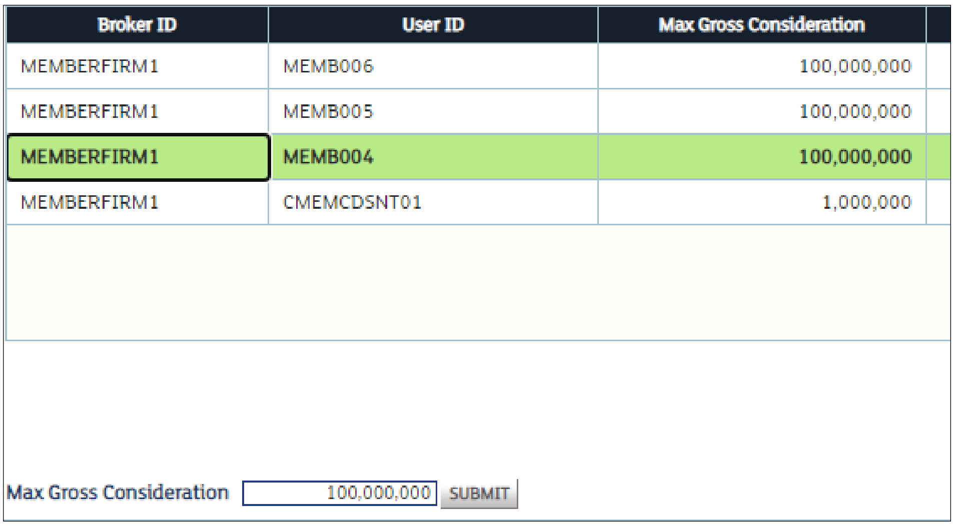
- List of Monitored Users
- Maximum Gross Consideration (MGC) set per User ID
- Current Global Gross Consideration
- Status – Suspend or Activate users
- MGC Breach Alert – Enable/Disable notifications of MGC is breeched.
- Alerts – Email notifications sent when MGC utilisation percentages are breached and can be ‘Enabled’ or Disabled’



b) Setting Max Gross Consideration

From the ‘Sponsoring View’ window, Risk Controllers can set Maximum Gross Consideration for each User ID by;

1. Selecting the User ID for MGC limits (Selected row becomes green)
2. Putting a Value in the Max Gross Consideration field
3. ‘Submit’ changes



c) Activate/Suspend a User ID

From the ‘Sponsoring View’ window, the Risk Controller can Suspend or Activate Suspended Users from the ‘Status’ column:

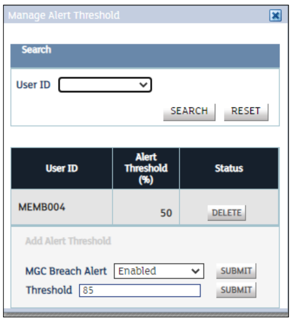
1. Click on ‘Suspend’ button for the User ID you wish to Suspend
2. Confirm the changes.

Note: Suspended User IDs would have ‘Status’ displaying ‘Activate’.

d) Setting Maximum Gross Consideration Breach Alert Levels

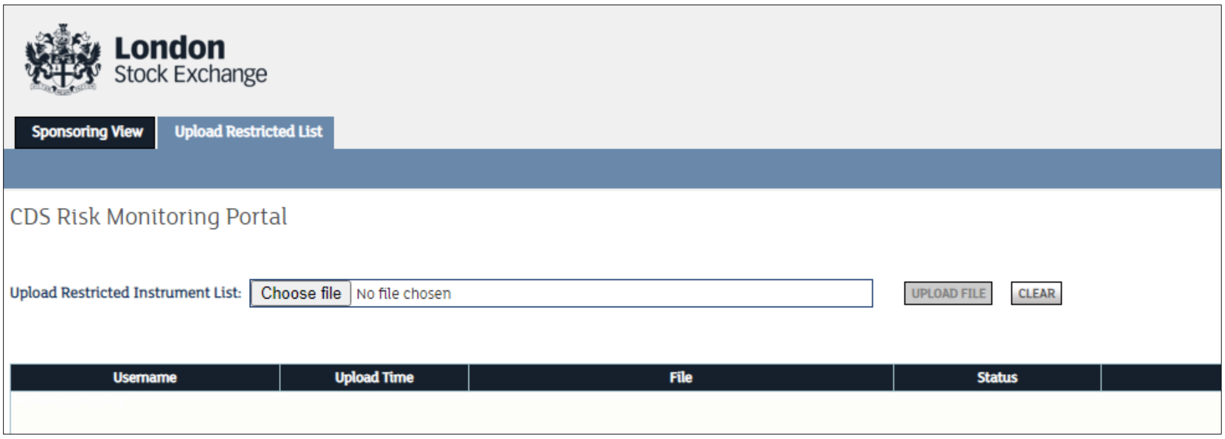
From the ‘Sponsoring View’ window, the Risk Controller can choose custom Maximum Gross Consideration (MGC) alert levels. A notification would be seen on the Risk Monitoring Portal if a Risk Monitored user utilises a defined percentage of the MGC. To set MGC Breach alert;

1. Click the ‘Enabled’ button within the ‘MGC Breach Alert’ column that is associated with the User ID you would like to set alerts for.
2. The ‘Manage Alert Threshold’ window would appear. Enter a number from 0 to 100 inside the ‘Threshold’ field. The number represents the percentage of the MGC that needs to be utilised by the Risk Monitored User before you receive a notification.
3. Submit changes. Repeat this process if you would like to set additional Alert Threshold percentages.



e) Upload Restricted List

From the ‘Upload Restricted List’, the Risk Controller can upload Restricted Instrument Lists using a .csv.



For characteristics and format requirements of the .csv file, please refer to the relevant part of Section 4.6.1 Updating a Restricted Instrument List via SFTP.

For more information on Uploading Restricted Instrument Lists via the Risk Portal, please refer to section 4.6.2 Updating a Restricted instrument List via Risk Monitoring Portal

6 Enhanced Pre-Trade Risk Controls

EPTRC (are optional) and are managed via the Risk Monitoring Portal, which allows the Risk Controller to set and manage limits per Monitored User (per user connection i.e. FIX Comp ID and Native User ID), per Risk Controller.

EPTRC limits are available per user connection (FIX Comp ID and Native User ID) and not at the Participant (Member Firm) level.

EPTRC limits are available for Exchange Traded Products and INTL ETP instrument groups:

- Exchange Traded Products instrument group = SETS segments (ETFS, ETF2, ETFU, ETCS, ETC2, ETCU, IECR, IECF)
- INTL ETP instrument group = Trading Service ETPs - ICSD settlement model segments (EUET, EUE2, EUE3, ECE1, ECE2, ECE3)

EPTRC are applied to RFQ Quotes submitted via FIX and Native Interfaces. All other order types will be rejected as Trader Group will not have relevant privileges. The Following EPTRC are available;

- Maximum Gross Consideration
- Maximum Net Consideration
- Maximum Order Value
- Restrict Order Type per security
- Monitored User Kill Switch

The RFQ Quote value will be calculated as Maximum of Bid Value and Offer Value as it might be not defined whether the Market Maker is a Buyer, or a Seller until the Requestor hits/lifts the Quote.

RFQ Quote value = Max {Bid Size * Bid Price, Offer Size * Offer Price}

6.1 Maximum Order Value

The Maximum Order Value (MOV) limit prevents a Monitored User from submitting overly large RFQ Quotes. If a Monitored User attempts to submit an RFQ Quote which would result in exceeding the configured Maximum Order Value, the request will be rejected.

The Maximum Order Value limit is defined as a multiplier of Average Daily Turnover (ADT) of an instrument.

Max Order Value = <Multiplier defined by Risk Controller> * Max {ADT, PTR MOV Min Multiplier}

The PTR MOV Min Multiplier for ETPs is 100k of the instrument trading currency.

If the Max Order Value limit is set to zero, no single order of the relevant Order type is allowed.

ADTs can be found in the XLON instrument reference data file.

6.2 Maximum Gross Consideration

The Maximum Gross Consideration (MGC) limit prevents Monitored Users from trading beyond a limit set by the Risk Controller. If a Monitored User attempts to submit an RFQ Quote which would result in the Current Gross Consideration exceeding the configured Maximum Gross Consideration, the RFQ Quote will be rejected.

Current Gross Consideration is defined as the sum of the value of all Trades done today plus the value of all open RFQ Quotes.

Example:

Current Gross Consideration (CGC) = Consideration of all Trades during the day + Value of all currently open RFQ Quotes

Maximum Gross Consideration limit can be set at two levels:

- Global – the MGC exposure per Monitored User across all instruments
- Instrument – the MGC exposure per Monitored User per instrument. The limit needs to be set per instrument group, but then applies to each instrument in that group separately

For example, if the limit per ETF instrument group is set to 10,000 and Instr1 and Instr2 belong to that group. The Maximum Gross Consideration allowed for Instr1 is 10,000 and the Maximum Gross Consideration for Instr2 = 10,000.

An instrument limit must be less than or equal to the global limit. When both limits are defined, a request will be validated against both limits. If either validation fails, the request will be rejected.

If either limit is set to zero, no single request is allowed.

The value is configured per Monitored User for a trading day, in a base currency defined for the User. FX conversion will be carried out based on the trading currency of the instrument. For more information, see Section 6.8 Currency Conversion.

6.3 Maximum Net Consideration

The Maximum Net Consideration (MNC) limit prevents a Monitored User from trading beyond a net limit between BUY and SELL positions. If a Monitored User attempts to submit an RFQ Quote which would result in the Current Net Consideration exceeding the configured Maximum Net Consideration limit, the RFQ Quote will be rejected.

Current Net Consideration can be negative if the SELL exposure exceeds the BUY exposure. The limit is defined and applied as an absolute value.

Example:

If Maximum Net Consideration is set to 10,000, the allowed net consideration is from -10,000 to +10,000.

> Current Net Consideration (CNC) = Consideration of all BUY Trades during the day + Value of all BUY RFQ Quotes’ sides - Consideration of all SELL Trades during the day – SELL RFQ Quotes’ sides.

The Maximum Net Consideration limit can be set at two levels:

- Global – the Maximum Net Consideration per Monitored User across all instruments
- Instrument – the Maximum Net Consideration per Monitored User per instrument. The limit needs to be set per instrument group, but then applies to each instrument in that group separately.

For example, if ETF instrument group includes Instr1 and Instr2 and the limit is set to 5,000, the Maximum Net Consideration for Instr1 = 5,000 and the Maximum Net Consideration for Instr2 = 5,000.

The instrument limit has to be less than or equal to the global limit. When both limits are defined, a request will be validated against both limits. If either validation fails, the request will be rejected.

The value is configured per Monitored User for a trading day, in a base currency defined for the User. FX conversion will be carried out based on the trading currency of the instrument. For more information, please see Section 6.8 Currency Conversion.

The example of the Current Net Consideration calculation is given in Section 6.4 Current Gross Consideration and Current Net Consideration calculation.

6.4 Current Gross Consideration and Current Net Consideration Calculations

The table below describes how the CGC and CNC are updated during the RFQ process:

Following trade execution, CGC and CNC will be adjusted with the Trade value.

Msg type	CGC/CNC update for Market Maker
RFQ Quote	CGC = Previous CGC + RFQ Quote Value CNC = Previous CNC + Max {Net1, Net2}, where: Net1 = ICNC+RFQ Quote Value| – absolute net value if Market Maker is a Buyer Net2 = |CNC-RFQ Quote Value| – absolute net value if Market Maker is a Seller
Trade is executed	CGC = Previous CGC + Trade Value – RFQ Quote Value CNC = Previous CNC +/- Trade value – RFQ Quote Value *(If Net1 is used to update CNC on a previous step)* CNC = Previous CNC -/+ Trade value + RFQ Quote Value *(If Net2 is used to update CNC on a previous step)*

Example: Manual RFQ process for Instrument 'ABC'

User Base Currency = GBP, MGC = 3000, MNC = 320
Instrument trading currency = GBP

	Steps	Order/trade consideration	CGC update for Market maker	CNC update for Market Maker	Last CGC	Last CNC
1	Requestor (R) submits RFQ, Qty=10		No update	No update	700	-200
2	Market Maker (M) responds with quote Bid 10@9.5 Offer 10@12.5 The quote is rejected	Bid Value=10*9.5=95 Sell Value =12.5*10=125 RFQ Quote Value=125	700+125=825 MGC validation passed (825<MGC)	Max{INet1I,INet2I} Net1=-200+125=-75 Net2=-200-125=-325 CNC=-325 MNC validation failed (325>MNC)		
3	Market Maker (M) responds with another quote Bid 10@9.5, Offer 10@11.5 The quote is accepted	Bid Value=10*9.5=95 Sell Value =11.5*10=115 RFQ Quote Value=115	700+115=815 MGC validation passed (815<MGC)	Max{INet1I,INet2I} Net1=-200+115=-85 Net2=-200-115=-315 CNC=-315 MNC validation passed (315<MNC)	815	-315
4	Quote Response (SELL) is accepted and trade is executed, the remainder of RFQ quote is expired	Trade Value=10*9.5=95	815+95-115=795 CGC is adjusted with the trade value.	-315+95+115=-105 CNC is adjusted with the trade value.	795	-105

6.5 Email Notifications and Alerts on Breaching Limits

The Risk Controller can receive warnings to alert them when their Monitored Users breach any set limits (i.e., Global or Instrument Maximum Gross Consideration, Global or Instrument Maximum Net

Consideration, or Maximum Order Value). The email notification will be sent upon each RFQ Quote being rejected due to an attempt to breach the limit.

The Risk Controller is also able to receive advance warning when their Monitored Users pass given limits which can be configured as necessary (e.g., 90%, 99%, etc.) of Global Maximum Gross Consideration and Global Maximum Net Consideration. This is not available at instrument level.

For Example:

A Monitored User has a Max Gross Consideration of 100,000 euros and an alert limit is setup to 75%. When the User’s Current Gross Consideration exceeds 75,000 euros, the Risk Controller will be notified via email and via the Risk Control Portal.

Where multiple limits are breached by a single RFQ Quote, only the alert for the highest limit will be sent. An alert will only be sent once during any given day, unless the Max Gross Consideration or Max Net Consideration is updated.

See Section 7.1d Managing Risk Limits ad Alerts for more details on how to setup the alerts in the Risk Monitoring Portal.

6.6 Restricting Order Types per instrument

Risk Controllers will be able to restrict RFQ quotes for specific instruments.

– RFQ Quotes

For example, a specific user could be restricted from submitting RFQ Quotes for the instrument ISF.

See Section 7.1d Managing Risk Limits and Alerts on how to setup the Restricted Order types in the Risk Monitoring Portal.

6.7 Kill Switch

The Risk Controller can, at any time, suspend any of their Monitored Users from trading. I.e., The Kill Switch is per Monitored User (per user connection i.e., FIX Comp ID and Native User ID), per Risk Controller. Upon the suspension, all relevant open RFQ Quotes will be rejected.

6.8 Currency Conversion

All limits (Maximum Order Value, Maximum Gross Consideration and Maximum Net Consideration) are specified in a defined base currency for the Monitored User. All RFQ Quotes submitted will be converted from the traded currency to the base currency before these limits are validated. The exchange rates for this currency conversion are obtained from the European Central Bank and maintained by London Stock Exchange via a daily file upload.

Please see Section 6.1b for information on how to change base currency.

7 EPTRC Risk Monitoring Portal

The Risk Monitoring Portal is a secure web-based GUI tool accessed via a secure login (accessible via LSEG infrastructure) which allows Risk Controllers to monitor trading activities and amend limits of their Monitored Users.

EPTRC features in the Risk Monitoring Portal include:

- Set the Base Currency per Monitored User
- Upload Maximum Gross Consideration, Maximum Net Consideration and Maximum Order Value limits via csv file and subsequently amend them in the Risk Monitoring Portal
- View Current Gross Consideration and Current Net Consideration per Monitored User
- Upload Restricted Order Types via csv file and subsequently amend in the Risk Monitoring Portal
- Invoke the Kill Switch

Access to the Risk Monitoring Portal will require the use of LSEG provided RSA tokens. These will be provided as part of the enablement process.

The Risk Monitoring Portal is available from 03:00 to 18:15 (UK time).

7.1 Risk Controller view

a) My Firms view

Once the Risk Controller logs into the Risk Monitoring Portal, the 'My Firms' window will be displayed. It will show the summary of EPTRC information for all the firms they are monitoring:

- Monitored Users inactivated by the Risk Controller via Kill Switch functionality
- Current Global Gross Consideration per firm
- Current Global Net Consideration per firm
- Number of Monitored Users that have breached the Maximum Gross Consideration limit today
- Number of Monitored Users that have breached the Maximum Net Consideration limit today

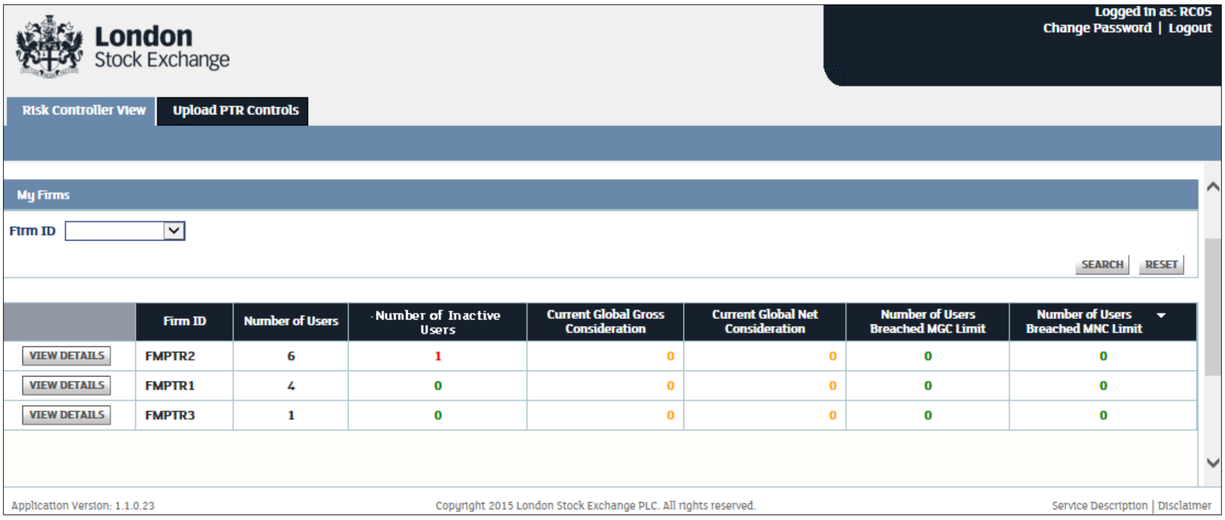


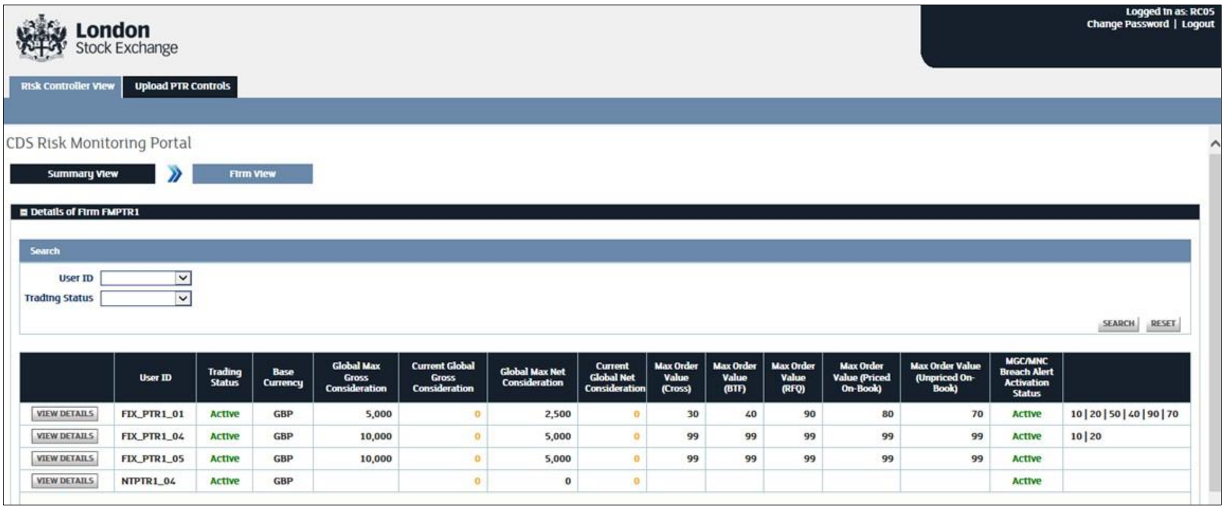
Figure 1 – My Firm View

b) Firm Details view

The 'Firm details' view can be accessed by clicking on the 'View details' button (or by double click on the row) on 'My Firms' view and will allow the Risk Controller to view data for all Monitored Users within that firm:

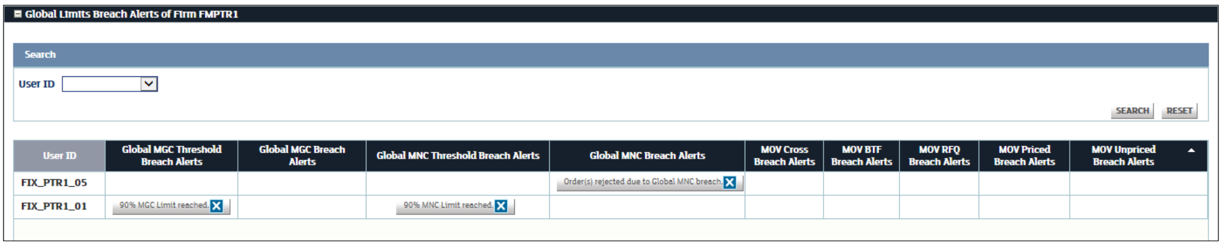
- List of Monitored Users
- Trading Status (Active/Inactive)
- Global Maximum Gross Consideration
- Current Global Gross Consideration
- Global Maximum Net Consideration
- Current Maximum Net Consideration

- Max Order Value for RFQ Quotes
- Maximum Order Value for Cross Orders (currently unavailable)
- Maximum Order Value for BTF Orders (currently unavailable)
- Maximum Order Value for RFQ (currently unavailable)
- Maximum Order Value for Priced Orders (currently unavailable)
- Maximum Order Value for Unpriced Orders (currently unavailable)
- Breach Alert Status
- Breach Alert Limits

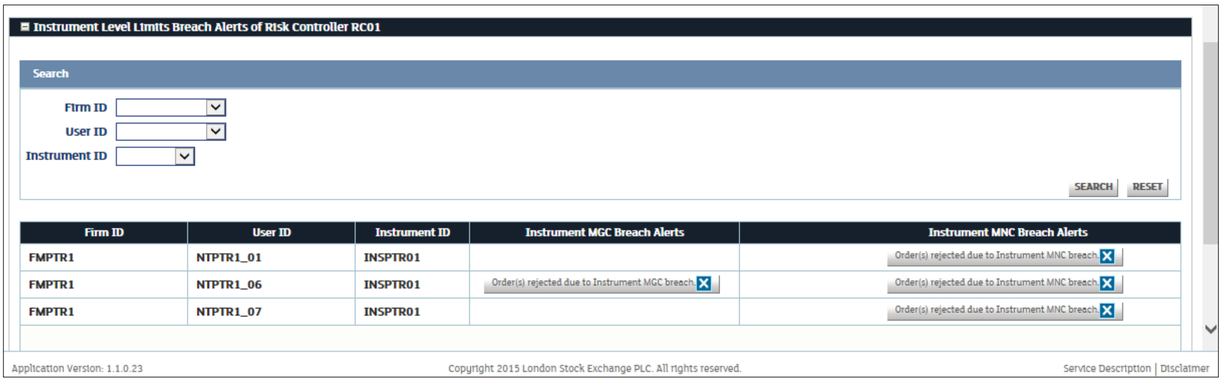


'Global level limits Breach Alerts' section shows:

- if any *alert limits* have been breached for Global MGC and MNC controls (e.g. 80% of MGC or 90% of MNC is breached)
- if any *actual limits* have been breached for Global MGC, MNC and MOV controls



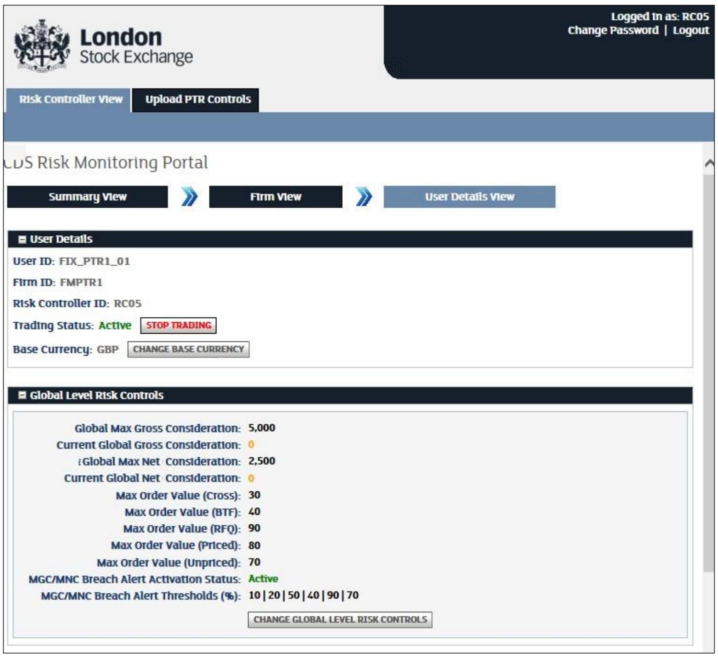
'Instrument level limits Breach Alerts' section shows if any *actual limits* have been breached for MGC and MNC at instrument level.

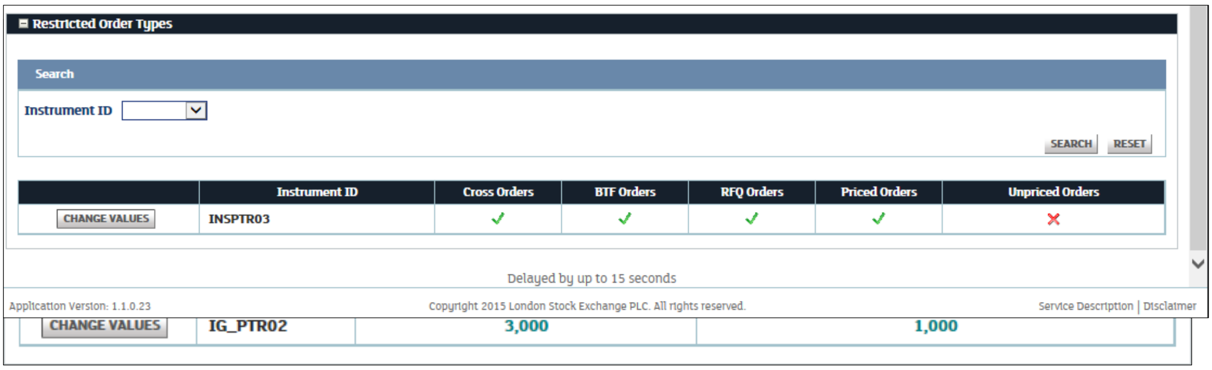


c) User Details view

The ‘User Details’ window can be accessed by clicking on the ‘View details’ button (or by double-clicking on the row) on ‘Firm Details’ view and will allow the Risk Controller to:

– view the Limits, current Global Maximum Gross Consideration and current Global Maximum Net Consideration values, Base Currency, Trading Status, Alert Limits
– view Restricted Order Type per individual instrument
– amend Limits
– amend Restricted Order Types
– amend Base Currency
– amend Breach Alert Limits
– stop trading via Kill Switch





d) Managing Risk Limits and Alerts

The initial setup of EPTRC limits must be done by file upload in the default currency ‘GBP’. For more information, see Section 7.2 Managing Risk Limits via File Upload. Subsequently, the limits can be amended in the portal using the User Details view.

Any changes to MGC, MNC, MOV limits and Restricted Order Type list will be applied within <15> seconds.

If a client attempts to amend i) Instrument MGC/MNC greater than Global MGC/MNC or ii) Global MGC/MNC less than Instrument MGC/MNC via the Portal the request will get accepted, however the limit is not updated. The user will be prompted with the following warning messages when amending the limit:

i. *Global Level PTR MGC threshold must be greater than the Instrument Level MGC thresholds of the user. Example Format: 9999999999.99. Clear entry to set NULL.*

ii. *"Instrument Level PTR MGC thresholds must not be greater than the Global Level MGC threshold of the user. Example Format: 9999999999.99. Clear entry to set NULL."*

If Base Currency is amended during the day (03:00 – 18:15 London time), the new value will only be applied for the next day (after 18:15). If there are multiple pending updates, the latest update will be applied. If Base Currency is amended after 18:15, the change will be applied immediately.

The Risk Controller can suspend any of their monitored Users from trading by clicking on the ‘Stop Trading’ button on User Details view. The User status will change to ‘Inactive’. The Risk Controller can resume trading when required by clicking the same button again.

The initial setup of any Restricted Order Types must be done through file upload. For more information, see Section 7.2 Managing Risk Limits via File Upload. Subsequently, the settings can be amended in the portal using the User Details view.

The Risk Controller can enable Breach Alerts for each user on the User Details view by setting the ‘MGC/MNC Breach Alert Activation Status’ to Active. If enabled, the Risk Controller will be notified when a monitored user breaches the limit or alert limit. The alert limits should be entered as pipe separated values. Up to 10 values are supported. The addresses of email recipients cannot be setup by the Risk Controllers themselves and the Technical Account Management Team at London Stock Exchange should be contacted:
londontam@lseg.com
+44 (0)20 7797 3939

7.2 Managing Risk Limits via File Upload

Risk controllers will be able to setup their limits via .csv file upload(s).

The file(s) can be uploaded on the ‘Upload PTR Controls’ view in the Portal. The status of each file upload will be displayed in the Portal.

The file(s) can also be uploaded via SFTP/FTP. Refer to the section File upload via SFTP/FTP for more details.

a) Uploading ***Global Maximum*** Gross Consideration, ***Global Maximum*** Net Consideration and Maximum Order Value

- The file must have PTRCGI_<Risk Controller ID>_< YYYYMMDDHHMMSS >.csv naming convention
- The file must not contain more than 500 entries
- The first row should always contain the following comma separated column headings:

  PTR Controller ID, User ID, MOV Cross, MOV BTF, MOV RFQ, MOV Priced orders, MOV Unpriced orders, MNC, MGC

- The 2nd row and onwards of the file should contain the list of Monitored Users and their corresponding values for Global Maximum Gross Consideration, Global Maximum Net Consideration and Maximum Order Value.
  - If any limit is not required or should be removed for a user, the relevant field should contain NULL (in capital text)

Example: File name – PTRCGI_RC1_20201010122301.csv

PTR Controller ID,User ID,MOV Cross,MOV BTF,MOV RFQ,MOV Priced orders,MOV Unpriced orders,MNC,MGC
RC1,A1,NULL,NULL,5,NULL,NULL,70000,100000
RC1,A2,NULL,NULL,8,2,NULL,80000,200000

Which represents:

PTR Controller ID	User ID	MOV Cross	MOV BTF	MOV RFQ	MOV Priced orders	MOV Unpriced orders	MNC	MGC
RC1	A1	NULL	NULL	5	NULL	NULL	70000	100000
RC1	A2	NULL	NULL	8	NULL	NULL	80000	200000

b) Uploading *Instrument* Maximum Gross Consideration and *Instrument* Maximum Net Consideration

- The file must have PTRCIns_<Risk Controller ID>_<YYYYMMDDHHMMSS>.csv naming convention
- The file must not contain more than 500 entries
- The first row should always contain the following comma separated column headings:

  PTR Controller ID,User ID,Instrument Group,MNC,MGC

- The 2nd row and onwards of the file should contain the list of monitored users and their corresponding values for Maximum Gross Consideration, Maximum Net Consideration per relevant Instrument Group.
  - If any limit is not required for a user, the relevant field should contain 'NULL' value (in capital text)

Example: File name - PTRCIns_RC1_20200803190525.csv

PTR Controller ID,User ID,Instrument Group,MNC,MGC
RC1, A1,Exchange Traded Products, NULL,100000
RC1, A2,Exchange Traded Products, 80000,200000

Which represents:

PTR Controller ID	User ID	Instrument Group	MNC	MGC
RC1	A1	Exchange Traded Products	NULL	100000
RC1	A2	Exchange Traded Products	80000	200000

c) Uploading Restricted Order Types

- The file must have ROT_<Risk Controller ID>_< YYYYMMDDHHMMSS>.csv naming convention
- The file must not contain more than 500 entries
- The first row should always contain the following comma separated column headings:

  PTR Controller ID, User ID, Instrument ID, Cross, BTF, RFQ, Priced orders, Unpriced orders

- The 2nd row and onwards of the file should contain the list of monitored users and corresponding order types restricted per individual security:
  - '0' means that the order type is restricted, '1' – order type is allowed
  - All columns must be specified with either 0 or 1. 'NULL' or other value will be considered as erroneous entry.

Example: File name - ROT_RC1_20200803190525.csv

PTR Controller ID,User ID,Instrument ID,Cross,BTF,RFQ,Priced orders,Unpriced orders
RC1,A1,INS1,0,0,1,1,1
RC1,A1,INS2,0,0,0,1,1

Which represents:

PTR Controller ID	User ID	Instrument ID	Cross	BTF	RFQ	Priced orders	Unpriced orders
RC1	A1	INS1	0	0	1	1	1
RC1	A1	INS2	0	0	0	1	1

d) Common file upload characteristics

- Files uploaded in the FTP folder or via the Portal will be processed every 30 seconds.
- If upload is successful, the changes will be applied immediately. If an error is encountered during the processing, the entire row will be rejected.
- No changes will be done to the entries which are not specified in the file.
- The file must contain values in all columns. If no value is specified in any one of the columns, the upload for that whole user row will be rejected.
- If invalid Risk Controller ID, User ID or Instrument Group is specified, the upload for that user row will be rejected.

- Once the file upload is completed, an **.err** file and an **.ok** file will be generated in csv format:
  - The **.err** file will be generated in the format below and contain the entries being rejected with the respective reason. Refer to the Section 7.2f Reject Codes for file upload for more details on the possible reject reasons.

    Line 1 of the file: [Content of the row being rejected, <Error Code A>, Error Reason>]

    Line 2 of the file: [Content of the row being rejected, <Error Code B>, Error Reason>]
  - The **.o**k file will contain the entries which were successfully processed.

For example,

ROT_RC2_20200803190525.csv has been uploaded:

PTR Controller ID,User ID,Instrument ID,Cross,BTF,RFQ,Priced orders,Unpriced orders
RC2,A1,INS1,0,0,1,1,1
RC2,A2,INS1,0,0,0,,
RC2,A2,INS2,0,0,0,,NULL

Which represents:

PTR Controller ID	User ID	Instrument ID	Cross	BTF	RFQ	Priced orders	Unpriced orders
RC2	A1	INS1	0	0	1	1	1
RC2	A2	INS2	0	0	0		
RC2	A2	INS2	0	0	0		NULL

.ok and .err files generated will be as follows:

- Output ROT_RC2_20200803190525.ok will contain entries:

PTR Controller ID,User ID,Instrument ID,Cross,BTF,RFQ,Priced orders,Unpriced orders

RC2,A1,INS1,0,0,1,1,1

- Output ROT_RC2_20200803190525.err will contain entries:

PTR Controller ID,User ID,Instrument ID,Cross,BTF,RFQ,Priced orders,Unpriced orders,Error Code,Error Reason
RC2,A2,INS1,0,0,0,,,0027,Missing value(s) in this entry
RC2,A2,INS2,0,0,0,,NULL,0028,Invalid value specified in this entry

- The .err and .ok files will be created in the FTP location.

e) File upload via SFTP/FTP

SFTP server is available 24 hours a day, 365 days a year but will only process files between 06:00 and 18:00 (London time) on trading days.

Please contact LSE Market Management for setting up an SFTP account and more details on SFTP process.

f) Reject codes for file upload

The following table summarises all of the errors that can be provided during file upload:

Error Code	Description
0014	Incomplete file name
0015	Invalid pre-trade risk UNR file type
0016	Maximum no of entries exceeded in PTR file
0017	Invalid PTR Controller in file name
0018	Invalid timestamp format in file name
0019	Insufficient privilege for PTR Controller to upload risk controls
0020	PTR Controller is inactive

Error Code	Description
0021	Incorrect column count for the table entry
0022	User ID not found
0023	PTR Controller not found
0024	PTR Controller does not have privilege to upload on behalf of others
0025	Instrument not found
0026	Instrument group not found
0027	Missing value(s) in this entry
0028	Invalid value specified in this entry
0029	Entry rejected by System
0030	Instrument Group is not a Pre-Trade Risk Management type
0031	Negative values not allowed for MGC
0032	Negative values not allowed for MNC
0033	Negative values not allowed for MOV Cross
0034	Negative values not allowed for MOV BTF
0035	Negative values not allowed for MOV RFQ
0036	Negative values not allowed for MOV Priced Orders
0037	Negative values not allowed for MOV Unpriced Orders
0038	Max value exceeded for MGC
0039	Max value exceeded for MNC
0040	Max value exceeded for MOV Cross
0041	Max value exceeded for MOV BTF
0042	Max value exceeded for MOV RFQ
0043	Max value exceeded for MOV Priced Orders
0044	Max value exceeded for MOV Unpriced Orders
0045	Fractional part can have 2 digits only
0046	Max no of ROT files exceeded
0047	Max no of PTRCGI files exceeded
0048	Max no of PTRCIns files exceeded
0049	No change from this entry
0050	Max line length exceeded
0051	Replaced by a later entry

8 How to request Exchange Level Controls and/or Enhanced Pre-Trade Risk Controls with Risk Monitoring Portal access?

8.1 Risk Controller and Member Firm access

Member Firms can grant access to the Risk Monitoring Portal by submitting an Exchange Level Controls Consent Form to the Membership Team. Applications can be completed on behalf of a Member Firm where the Risk Controller is the Firm's GCM.

Please contact the Membership Team on +44 (0)20 7797 1900 or membership@lseg.com for the Exchange Level Controls Consent Form.

Once the required paperwork is received by the Membership Team, firms will need to liaise with their dedicated Technical Account Manager or Technical Account Management team londontam@lseg.com or +44 (0)207 797 3939 for Risk Monitoring Portal Access, FTP upload (optional) and CDS and Production PTV configurations.

Firms will be expected to complete a Configuration Form provided by the Technical Account Management team to capture these requirements.

8.2 Risk Monitoring Portal unavailable

In the event that a Risk Controller cannot access the Risk Monitoring Portal to monitor Firms or adjust limits, the Risk Controller should contact Market Operations and request that they intervene on their behalf. It is also possible to maintain the Restricted Instrument List for validation by contacting London Stock Exchange's Market Operations (MOPS) team.

Market Operations can be contacted on +44 (0)207 797 3666 option 1 or by e-mail at msu@lseg.com.

8.3 Customer Testing

Firms can only connect to Production with certified software but there is no additional certification testing required for ELC enablement.

An optional Daily Life Cycle (DLC) test is conducted with the Risk Controller and a member of the CTS Market Access team to test the risk control functionality in the Customer Development Service (CDS) environment prior to production go-live. A DLC test can be booked by contacting the Market Access team marketaccess@lseg.com.

The DLC test will focus on a combination of scenarios including:

- Managing risk limits via the Risk Monitoring Portal
- Managing risk limits via FTP upload (if required)
- Managing Restricted Order Types
- Managing Breach Alert Limits
- Stop trading via Kill Switch

Access to the CDS environment fall under the existing agreements member firms have with London Stock Exchange. For further information on the daily life cycle please email market access.

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