London Stock Exchange Derivatives Market

Guide to Pre-Trade Validation Service

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Guide to Pre-Trade Validation Service
November 2016

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1.   Document history

Issue	Date	Description
1.0	September 2016	Document creation
2.0	November 2016	Updated version: extension to LSEDM Equity Derivatives

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2.   Pre-Trade Validation Service Overview

2.1.   Overview

The Pre-Trade Validation Service (PTVS) offered by LSEDM complements the risk control systems in place by LSEDM participants to control order flow activity.

In particular, PTVS provides an additional tool for:

- General Clearing Members (GCMs) to manage the cleared risk exposure generated by the trading activity of their NCPs;

- LSE Members offering Direct Market Access (DMA) to control the risk related to the trading activity of their DMA clients;

- LSE Members to monitor the risk associated to their own trading activity.

The PTVS is available for all products listed on LSEDM, via both SOLA native APIs (SAIL) and a dedicated GUI.

The PTVS can be configured by a GCM or an LSE Member (the "Risk Manager") to constrain its own trading activity or the trading activity of its controlled client (the "Managed Entity"), in case of any breach of pre-defined thresholds as configured by the Risk Manager. Such constraints range from the cancellation of a single incoming order to the cancellation of all resting orders and quotes, plus a complete freeze of the technical connection to the matching engine, thereby preventing the client from inserting any new order or quote.

This document provides an overview of the functionalities provided by the PTVS, including details of the Pre-Trade Validation rules available for the users of the service.

2.2.   Definitions

Risk Manager

A Risk Manager is an LSE Member that wishes to control the level of risk determined by the order flow of its own actitivity or that of one of its NCPs/DMA clients (as the case may be) trading products listed on LSEDM.

The PTVS allows the Risk Manager to set Risk Limit Thresholds for a Managed Entity, at the level of a specific Instrument Series or for an Instrument Group.

Managed Entity

A Managed Entity means an entire Firm (defined by its Firm ID), a single TraderID or a group of Trader IDs of the same Firm, that are subject to a common set of Pre-Trade Validations as defined by a Risk Manager[1].

A Managed Entity could be subject to Pre-Trade Validations by more than one Risk Manager. In this case, the more stringent limits will apply.

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[1] In case a Group of Trader IDs of the same Firm is configured in order to be subject to the same set of Pre Trade Validations, it is referred to as a "Trader Team". Moreover, it is also possible to configure a TraderID as responsible for a Trader Team (aka "Team lead") and to which all the other TraderIDs will be referenced.

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Risk Counters

Risk Counters are metrics that are calculated internally by the trading system and updated, as necessary, on order entry, modification and cancellation, and on trade execution. Risk Counters are compared with the respective Risk Limit Thresholds in order to control the level of risk accumulated by a Managed Entity.

Risk Counters are always reset to zero before the start of a new trading day.

A full description of the Risk Counters maintained by the PTVS is provided in Section 5.

Risk Limit Thresholds

Risk Limit Thresholds are the values, as defined by a Risk Manager, representing the maximum value that a Risk Counter can assume before triggering a pre-defined action that will limit the trading activity of a Managed Entity. A full description of the actions triggered by the breach of each Risk Limit Threshold is provided in Section 6.

Specific thresholds related to the Market Maker quoting protection (MMQP) functionality are refered to as "MMP Limits". For a full description of the MMQP and its related risk controls, please refer to the "LSEDM - Bulk Quoting Protection Description" document available on the LSEDM website (http://www.lseg.com/derivatives/document-library).

Pre-Trade Validations

Pre-Trade Validations are the controls, executed on the SOLA trading system, that compare a Risk Counter to its related Risk Limit Threshold, trigger a pre-defined action on the trading activity of the Managed Entity in case of breach of the relevant Risk Limit Thresholds.

The following Pre-Trade Validations are available in the PTVS:

- Max Order Quantity limit for orders and quotes;
- Max Order Quantity limit for cross/bundled/third party orders[2] (for Equity derivatives only);
- Position limit on executed trades (net long/short position) during the day, expressed in quantity terms;
- Exposure limit on open orders (excluding quotes) plus executed trades (net long/short position) during the day, expressed in quantity terms;
- Kill Switch functionality;
- Access to the MMQP functionality, allowing the Risk Manager to specifically control the Managed Entity's quoting activity based on bulk quotes.

Risk Limit Usage

In order to provide real-time information on the level of risk accumulated by a Managed Entity, the PTVS disseminates messages related to the "usage" (expressed as a percentage of the related Risk Limit Thresholds as defined by its Risk Manager) of its Position and Exposure limits.

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[2] For more information about Cross/Bundled/Third Party orders, please refer to the "LSEDM Trading Services Description" document available on the LSEDM website (http://www.lseg.com/derivatives/document-library).

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Details regarding the available alerts and rules for the dissemination of Risk Limit Usage messages through the SOLA protocols are described in Section 6.

Order

An Order means an offer to buy or sell a number of Contracts submitted to an Order Book. The minimum information content of an order includes i) the instrument, ii) the quantity, iii) the price, iv) the dealing capacity (for own or customer account), v) the type of transaction (buy or sell) and vi) the market mechanism and validity types (aka "method of execution").

Quote

A quote means a bid or bids and/or offer or offers entered using the Bulk Quoting functionality.

Instrument Series

A Instrument Series means a single tradable derivatives instrument, uniquely identified by an ISIN code and by an Instrument ID in SOLA.

Instrument Group

An Instrument Group means an ensemble of Instrument Series on the same underlying with the same delivery type (i.e. cash or physical delivery) and instrument type (i.e. futures or options).

3. Setting Pre-Trade Validations

3.1. Obtaining access and testing of the Pre-Trade Validation Service

How to get access to the PTVS

LSE Member Firms interested in the PTVS should contact their Technical Account Manager to be enabled for Pre-Trade Validations.

The Risk Manager will be required to fill in a Pre-Trade Risk Customer Request Form for each Managed Entity whose order flow he wants to control, indicating the Trader ID / Group of Trader IDs to be assigned pre-trade validation controls. The Technical Account Management team will provide the customer with the relevant connectivity details.

Relevant contant details are available in Section 8.

How to test the PTVS

Members that are developing software via the SAIL gateway to manage the PTVS must certify their software in accordance with the LSEG Connectivity Policy before using the software in production. Additionally, Members are required to perform at least two certification tests per software within a 12 month period.

At least one test must be a full certification test whilst the second test can be an email confirming the software has not changed.

Software Certification Guides can be found on the LSEDM website at the following location: http://www.lseg.com/derivatives/document-library.

Members using an accredited ISV to manage pre-trade validations will not be required to perform any certification test before using it in production. However, Members are strongly encouraged to test in the Customer Development Service (CDS) to ensure their systems and processes are functioning as expected.

Members should contact their Technical Account Manager or the Technical Account Management team to discuss software certification and testing.

3.2. Defining Managed Entities

Based on information provided by the Risk Manager in the Pre-Trade Risk Customer Request Form, the Technical Account Management team will set up the Managed Entity.

Configuration relevant to a Managed Entity will be effective from the first Trading Day after the changes are confirmed by the Technical Account Management team.

In advance of setting up pre-trade validation controls, the Risk Manager should inform the Managed Entity that these will be implemented; if in doubt, the Managed Entity should check with its Risk Manager whether pre-trade validation controls are applied to its orders.

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3.3.   How to set Pre-Trade Validations in SOLA

Once the required Managed Entities are configured, SOLA native APIs (SAIL) offer a set of dedicated messages to a Risk Manager in order to:

- define which Pre-Trade Validations must be executed for each Managed Entity;

- set up and update the related Risk Limit Thresholds. Configured thresholds can be updated in real-time, with immediate effectiveness.

The following messages are available to define limits in the SOLA APIs and to get updates on Risk Limits usage:

- MK: message used to configure Risk Limit Thresholds;

- MQ: message used to configure MMP Limits;

- RT: message used to enable the Kill Switch functionality.

For full details on available SAIL messages implementing the Pre-Trade Validation Service, please refer to the SAIL Specification document available on the LSEDM website (http://www.lseg.com/derivatives/document-library).

4. Pre-Trade Validations

This section describes the Pre-Trade Validations that are executed by the PTVS on incoming orders and/or quotes of a Managed Entity, according to the configurations and Risk Limit Thresholds defined by the Risk Manager for each Managed Entity.

Please note that, for the purpose of calculating Position and Exposure limits for Curve Global Products listed on LSEDM, the following are out of scope:

- cross/bundled/third party orders and trades;

- iceberg orders and trades (since not available in these products).

On the contrary, please note as well that spread based limits are available for Curve Global products only.

4.1. Maximum Order Quantity Limit for orders and quotes

The system allows a Risk Manager to specify a maximum order quantity for orders and quotes inserted by the Managed Entity in the trading system[3]. In case the incoming order/quote has a quantity greater than the specified threshold, it will be automatically rejected[4].

Relevant Risk Limit Thresholds: MaxOrderQuantity.

4.2. Maximum Order Quantity Limit for cross/bundled/third party orders *(available for Equity derivatives only)*

The system allows a Risk Manager to specify a maximum order quantity for cross/bundled/third party orders inserted by the Managed Entity in the trading system[2]. In case the incoming order falling in one of these categories has a quantity greater than the specified threshold, it will be automatically rejected.

Relevant Risk Limit Thresholds: Max Order Quantity on Cross/Bundled/Third Party Orders.

4.3. Position Limits (*on executed trades*)

The system allows a Risk Manager to specify a set of limits to control the maximum position accumulated during the trading day by the Managed Entity on executed trades.

On execution of a trade, in case the long / short position accumulated by the Managed Entity goes outside the specified thresholds, the system will remove all the booked orders (at the given granularity) on the relevant side of the order book and prevent any new order and quote from entering the system that could generate a further increase of the controlled long / short position. Thus, in case the MaxTradedLong threshold is breached, all resting buy orders are cancelled and no new buy orders can be inserted in the system.

Please note that, as described above, Position Limits are triggered only after the specified Risk Threholds have been passed.

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[3] No Risk Counter is associated to Maximum Order Quantity Limits, since it applies to a single incoming order.
[4] Each quote in a bulk quote is individually validated. This means that, if a quote has a quantity greater than the related specified threshold, it will be rejected while validation for the all other quotes in the bulk quote will be carried on.

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For Curve Global products listed on LSEDM, specific Position Limits are available for strategies, expressed in term of "equivalent spreads" (see "TradedSpreads" counter in the "Group Risk Counters" table under Section 5.2).

Relevant Risk Counters: TradedNet, TradedNetLong, TradedNetShort, TradedSpreads.

Relevant Risk Limit Thresholds: MaxTradedLong, MaxTradedShort, MaxTradedSpreads.

4.4.   Exposure Limits (*on open orders plus executed trades*)

The system allows a Risk Manager to specify a set of limits to control the maximum exposure accumulated by the Managed Entity during the trading day, based on current open (unexecuted) orders[5] inserted in the system by the Managed Entity plus all executed trades.

When a new order enters the market, in case the long / short exposure for the Managed Entity goes outside the specified thresholds, the incoming order is rejected.

Unexecuted quotes are not included in the calculation of Risk Counters for Exposure Limits. In order to control the quoting activity of a Managed Entity, please refer to the "Access to Market Maker quoting protection" under Section 4.6.

Implied orders from strategies are not included in Risk Counters at Instrument Series granularity, while implied trades are taken into account (for full definitions and calculation rules for the Risk Counters, see Section 5).

Exposure Limits are strict limits in the sense that they are triggered to prevent the threshold value being surpassed.[6]

For Curve Global products listed on LSEDM, specific Exposure Limits are available for strategies, expressed in terms of "equivalent spreads" (see "ExposedSpreads" counter in the "Group Risk Counters" table under Section 5.2).

Relevant Risk Counters: BookedLong, BookedShort, BookedStrategySpreads, ExposedLong, ExposedShort, ExposedSpreads.

Relevant Risk Limit Thresholds: MaxExposedLong, MaxExposedShort, MaxExposedSpreads.

4.5.   Granularity of Pre-Trade Validations

For each Managed Entity[7], Pre-Trade Validations (with specific Risk Counters and dedicated Risk Limit Thresholds) can be configured at the level of:

- Instrument Series;
- Instrument Group.

Pre-Trade Validations for strategies are available at Instrument Group level only[8].

In case there are Maximum Order Quantity limits defined at both Instrument Series and Instrument Group level, the most restrictive limit will prevail.

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[5] Quotes inserted by the Managed Entity are not taken into consideration for the Exposure Limit's calculation.

[6] The only exception to this rule is the MaxExposedSpreads calculation (please refer to related Group Risk Counter on Section 5).

[7] As described in the definitions, a Managed Entity can be an entire Firm (defined by its Firm ID) or a single TraderID or a Group of Trader IDs belonging to the same Firm.

[8] All Risk Spread counters are calculated at the level of the Instrument Group to which the legs belong to and not at the Strategy Group level. Multi Group Strategies are not included in Risk Spread counters.

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4.6.   Kill Switch functionality

Using the Kill Switch functionality, a Risk Manager may disable a Managed Entity, removing all of its resting orders and quotes at the same time.

This functionality can be applied to an entire Firm, a Trader ID or a predefined Group of Trader IDs.

4.7.   Access to Market Maker quoting protection

Risk Managers have the possibility to define paramenters of the "Market Maker quoting protection" (MMQP) available in SOLA for Market Makers (MM) in order to control the behaviour of their applications. Through the MMQP, the trading system can be instructed to delete all resting quotes in case, during a specified time interval, excessive trading activity against the MM is taking place.

For a full description of the MMQP and its related risk controls, please refer to the "LSEDM – Bulk Quoting Protection Description" document available on the LSEDM website (http://www.lseg.com/derivatives/document-library).

Since the MMQP is available to both Market Makers and their Risk Managers, in case two sets of limits are applied to the same Managed Entity, the most restrictive configurations will apply.

The following parameters can be configured by a Risk Manager:

Field Name	Description
MmpMaxNbTrades	Maximum number of trades that can be executed by the MM in the time interval specified by the parameter "MmpCalculationTimeInterval".
MmpMinTradeVolume	Minimum size of the trades that must be counted to the purposes of the maximum number of trades control, as described above.
MmpMaximumTradedVolume	Maximum traded volume that can be executed by the MM in the time interval specified by the parameter ""MmpCalculationTimeInterval".
MmpMaximumTradedValue	Maximum traded value that can be executed by the MM in the time interval specified by the parameter "MmpCalculationTimeInterval".
MmpCalculationTimeInterval	Defines the time interval during which the protection rules defined above must be verified.

Please note that default values for the above parameters are also set at Exchange level. The Risk Manager must set values that are more stringent that the ones set by the Exchange, otherwise the requested modification will be rejected.

For more information about the default values for the above parameters applied at Exchange level, please refer to the "LSEDM Trading Services Description" document available on the LSEDM website (http://www.lseg.com/derivatives/document-library).

Please note as well that the Risk Manager is allowed to leave some values empty (in this case Exchange level will be applied by default).

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5. Risk counters

5.1. Instrument Risk Counters

Field	Description
TradedNet	Counter maintaining the net traded position of the Firm or Trader team. Incremented on creation of long positions, decremented on creation of short positions. $$T_{Ni} = T_{Li} - T_{Si}$$ where: T_{Ni} = Net traded positions for instrument i T_{Li} = Long traded positions for instrument i = $\sum_{side=long} t_i$ T_{Si} = Short traded positions for instrument i = $\sum_{side=short} t_i$ t_i = Trade for instrument i either as outright or leg of a strategy
BookedLong	Counter maintaining the number of booked orders on the long side. Incremented on entry of Buy order on the Instrument; Buy orders on Strategies with this Instrument as a buy-side leg; and Sell orders on Strategies with this Instrument as a sell-side leg. Decremented when the order is cancelled or trades. $$O_{Li} = \sum oO_{Li} + \sum oS_L L_{Li} + \sum oS_S L_{Si}$$ where: O_{Li} = Booked Long Orders for instrument i oO_{Li} = Booked Outright Long Order for instrument i $oS_L L_{Li}$ = Booked Strategy Long Order, Long on leg i $oS_S L_{Si}$ = Booked Strategy Short Order, Short on leg i
BookedShort	Same as booked long, for the short side. $$O_{Si} = \sum oO_{Si} + \sum oS_L L_{Si} + \sum oS_S L_{Li}$$ where: O_{Si} = Booked Short Orders for instrument i oO_{Si} = Booked Outright Short Order for instrument i $oS_L L_{Si}$ = Booked Strategy Long Order, Short on leg i $oS_S L_{Li}$ = Booked Strategy Short Order, Long on leg i

Field	Description
ExposedLong	Calculated on demand as the sum of BookedLong + TradedNet. $$E_{Li} = max(0, T_{Ni} + O_{Li})$$ where: E_{Li} = Long Exposure for instrument *i* T_{Ni} = Net traded positions for instrument *i* O_{Li} = Booked Long Orders for instrument *i*
ExposedShort	Calculated on demand as the sum of BookedShort – TradedNet. $$E_{Si} = max(0, O_{Si} - T_{Ni})$$ where: E_{Si} = Short Exposure for instrument *i* T_{Ni} = Net traded positions for instrument *i* O_{Si} = Booked Short Orders for instrument *i*

5.2. Instrument Group Risk Counters

Field	Description
TradedNetLong	Counter maintaining the sum of long TradedNet on all Instruments in this Group. $$T_{Lg} = \sum_{\forall i \in g} max(0, T_{Ni})$$ where: T_{Lg} = Long Traded positions for group g T_{Ni} = Net Traded position for instrument i
TradedNetShort	Counter maintaining the sum of absolute short TradedNet on all Instruments in this Group. $$T_{Sg} = \sum_{\forall i \in g} |min(0, T_{Ni})|$$ where: T_{Sg} = Short Traded positions for group g T_{Ni} = Net Traded position for instrument i
BookedLong	Counter maintaining the sum of Booked Long orders on all Instruments in the Group *(orders on strategies are not considered)*. $$O_{Lg} = \sum_{\forall i \in g} \sum oO_{Li}$$ where: O_{Lg} = Booked Long Orders for group g oO_{Li} = Booked Outright Long Order for instrument i
BookedShort	Counter maintaining the sum of Booked Short orders on all Instruments in the Group *(orders on strategies are not considered)*. $$O_{Sg} = \sum_{\forall i \in g} oO_{Si}$$ where: O_{Sg} = Booked Short Orders for group g oO_{Si} = Booked Outright Short Order for instrument i

Field	Description
BookedStrategySpreads *(available for Curve Global products only)*	Counter maintaining the booked volume of strategy orders weighted by a *spread factor.* $$X_g = \sum oS_g * sf$$ where: X_g = Booked Strategy Spreads for group *g* oS_g = Booked Strategy Orders for group *g* sf = spread factor, depending on the strategy $\quad = min(\sum |L_S|, \sum L_L)$ L_S = Negative leg ratio factor L_L = Positive leg ratio factor The spread factor is equal to 1 for Calendar Spreads and to 2 for Butterflies (Buy N contracts at first expiry date, sell 2*N contracts at far expiry date, buy N contracts at yet farther expiry date) and Condors (Buy N contracts at first expiry date, sell N contracts at later expiry date, sell yet N contracts at yet later expiry date, buy N contracts at yet later expiry date).
TradedNet	Counter calculated as the difference between TradedNetLong and TradedNetShort $$T_{Ng} = T_{Lg} - T_{Sg}$$ where: T_{Ng} = Net traded positions for group *g* T_{Lg} = Long Traded positions for group *g* T_{Sg} = Short Traded positions for group *g*
TradedSpreads *(available for Curve Global products only)*	Counter calculated as the smallest value between the TradedNetLong positions and TradedNetShort positions. $$Y_g = min(T_{Lg}, T_{Sg})$$ where: Y_g = Traded Spreads for group *g* T_{Lg} = Net Long traded positions for group *g* T_{Sg} = Net Short traded positions for group *g*
ExposedLong	Counter calculated as TradedNet + BookedLong. $$E_{Lg} = T_{Ng} + O_{Lg}$$ where: E_{Lg} = Long Exposure for group *g* T_{Ng} = Net traded positions for group *g* O_{Lg} = Booked Long Orders for group *g*

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Field	Description
ExposedShort	Counter calculated as BookedShort - TradedNet. $$E_{Sg} = O_{Sg} - T_{Ng}$$ where: E_{Sg} = Short Exposure for group g T_{Ng} = Net traded positions for group g O_{Sg} = Booked Short Orders for group g
ExposedSpreads *(available for Curve Global products only)*	Counter calculated as BookedStrategySpreads + TradedSpreads. Bundle and Third Party orders do not generate Exposure Spreads. $$Z_g = Y_g + X_g$$ where: Z_g = Spread Exposure for group g Y_g = Traded Spreads for group g X_g = Booked Strategy Spreads for group g

6.   Execution of Pre-Trade Validations

Messages submitted to SOLA will pass through the PTVS before reaching the electronic order book. Pre-Trade Validations are specific to the orders and/or quotes inserted by a Managed Entity and are in addition to the standard Exchange-based controls in place on the Exchange, which are implemented and enforced for all Member Firms.

On order / quote reception, the following sequence of actions are performed by SOLA:

1) check if any Position or Exposure limit for the relevant Managed Entity (on the relevant Group and/or Instrument) has been already reached:

   - in case the limit has been already reached, the incoming order / quote is rejected[9];

2) check if Exchange-based controls are passed:

   - in case Exchange-based controls are not passed, the incoming order / quote is rejected;

3) check if the Maximum Quantity limit for the relevant Managed Entity is breached (on the relevant Group and/or Instrument):

   - in case the limit is breached, the incoming order is rejected;

4) If the above validations are passed:

   - apply Circuit Breaker to the incoming quotes;

   - apply SEP to the incoming quotes;

   - if none of the two controls above require cancellation of the incoming order, the order is directed to the order book;

5) before an incoming order enters the order book, the counters related to an Exposure Limit are recalculated;

   - where, following recalculation of the Risk Counters, an Exposure Limits is breached, the actions described under paragraph 4.3 are triggered, including rejection of the incoming order;

6) where the previous check is passed, the incoming order reaches the order book. Should the incoming order aggress the order book, generating one or more trades:

   - the counters related to Position Limits are updated;

   - where, following recalculation of the Risk Counters, a Position Limit is breached, the actions described under paragraph 4.2 are triggered;

7) Risk Usage Messages are disseminated to both Risk Manager and related Managed Entity.

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[9] Quotes are individually validated. For this reason, the rejection of a quote does not imply the whole bulk quote to be rejected, and validations continue with the following quote contained in the bulk quote message.

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Risk Counters are also updated (and related actions are executed as described within Section 5), in the case of:

- order modifications and cancellations;

- trade executions;

- updates of the Risk Limit Thresholds by the Risk Manager.

7. Order status, error codes and Risk Usage Notifications

7.1. Order status codes

Where a Risk Limit Threshold is breached, dedicated codes are disseminated by the SOLA APIs to identify the reason of order rejection / cancellation. In the SAIL protocol, error codes are also disseminated in order to allow the Risk Manager to identify whether the relevant Pre-Trade Validation rule has been breached at the Firm vs. Trader level, or at Instrument Group vs. Instrument Series level.

Data type	Error code	Error message
SailOrderStatus/ FixOrdStatus	T	Order eliminated due to risk limit exceeded
	R	Order eliminated due to risk master switch
SailErrorCode	3100	Order Quantity Limit exceeded at the trader/instrument level
	3101	TradedLong limit exceeded at the trader/instrument level
	3102	TradedShort limit exceeded at the trader/instrument level
	3103	ExposedLong limit exceeded at the trader/instrument level
	3104	ExposedLong limit exceeded at the trader/instrument level
	3110	Order Quantity Limit exceeded at the trader/group level
	3111	TradedLong limit exceeded at the trader/group level
	3112	TradedShort limit exceeded at the trader/group level
	3113	ExposedLong limit exceeded at the trader/group level
	3114	ExposedLong limit exceeded at the trader/group level
	3115	TradedSpreads limit exceeded at the trader/group level
	3116	ExposedSpreads limit exceeded at the trader/group level
	3120	Order Quantity Limit exceeded at the Firm/instrument level
	3121	TradedLong limit exceeded at the firm/instrument level
	3122	TradedShort limit exceeded at the firm/instrument level
	3123	ExposedLong limit exceeded at the firm/instrument level
	3124	ExposedLong limit exceeded at the firm/instrument level
	3130	Order Quantity Limit exceeded at the firm/group level
	3131	TradedLong limit exceeded at the firm/group level
	3132	TradedShort limit exceeded at the firm/group level
	3133	ExposedLong limit exceeded at the firm/group level
	3134	ExposedLong limit exceeded at the firm/group level
	3135	TradedSpreads limit exceeded at the firm/group level
	3136	ExposedSpreads limit exceeded at the trader/group level
	3200	Risk Limit disabled for current group configuration
	3201	Spread Risk Limits cannot be defined for instruments
	3202	Risk Limit cannot be defined for strategy groups

7.2.   Risk Usage Notifications

Risk Usage Notification messages are sent following a recalculation of the Risk Counters, in order to alert Risk Managers and related Managed entity of the current level of usage of the allowed Risk Limit Threshold by the Managed Entity itself.

PTVS Exchange configuration will result in alerts being disseminated when the Risk Limit Threshold has been "used" at 50%, 60%, 70% and further 10% intervals of its full value, as may be defined by the Risk Manager.

Risk Managers and related Managed Entity are required to subscribe to dedicated messages in SOLA for receiving these alerts. In particular, the MN message disseminates the percentage of a Risk Limit Threshold, when it exceeds certain pre-defined values at the system level.

8.   Contact

For further information on this document or to discuss usage of the PTVS, please speak to your Account Manager at LSE Derivatives Market:

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- Telephone: +44 (0)20 7797 3833

For more information on the technical set up, enablement and testing, please contact your Technical Account Manager or the Technical Management team:

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