



# Risk Management Specification

# Revision History

Version	Notes	Author
1.0	Initial release, Summer 2017	Matt Stuppel
2.0	Addition of Risk Management Portal	George Cox

# Related Documents

Name	Link	Version	Comment
Market Model	<a href="https://www.equiduct.com/news-resources/documentation">https://www.equiduct.com/news-resources/documentation</a>	V4.9	

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# 1 Introduction

This document specifies the Risk Management functionality offered by Equiduct for use by trading participants and by third parties authorised to do so by participants, such as general clearing members (GCMs) and other post-trade facilitators.

## 1.1 Overview

The functions provided by the Risk Management service are:

1. Order nominal value limits, per market segment
2. Order limit price collar
3. Gross traded value limit
4. Trade (risk) drop-copy session with automatic “kill switch” functionality
5. Instrument (symbol) restrictions

These functions are layered atop existing risk-related services provided as part of the Equiduct production trading system:

6. Price monitoring – trades must occur within a collar around the mid-EBBO
7. Kill switch – Equiduct market operations team can immediately cancel all open interest and disallow order entry for a trading participant
8. Market segment restrictions (restrict trading to certain primary markets and/or currencies)
9. Fix session (port) throttles

## 2 Risk Management Functions

### 2.1 Order nominal value limits

Value limits can be assigned to apply to all orders submitted in a given Equiduct market segment, specified by primary market identifier, in EUR for that segment. Limit orders where the nominal value – calculated as limit price multiplied by order quantity – exceeds this limit, will be rejected.

Participants and authorised facilitators can set and change these limits by emailing a comma-separated values (csv) file to Equiduct Market Control containing the following information:

Participant	Primary Market	Currency	Maximum Order Value
FIRM1	XLON	EUR	10,000,000
FIRM1	XPAR	EUR	150,000
FIRM1	XLIS	EUR	50,000

### 2.2 Order limit price collar

Participants and authorised facilitators can set an Equiduct-wide percentage threshold around the mid-point of the EBBO against which the limit prices of aggressive orders will be checked. Orders with a limit price outside the configured threshold will be rejected.

This setting can be updated on request by Equiduct Market Control with any change being effective for the next trading day.

As an example, with the collar set at 3% if the EBBO is 10.15 / 10.25 then a buy order with limit price 10.50 (2.9% away from mid) will be accepted but with limit price 10.55 (3.4% away from the mid) will be rejected.

*If the EBBO is not valid at the time of order entry – for example due to a trading halt on the primary market – the collar will be checked against the last automated on-book trade price observed in the consolidated book. If no trades have occurred on the current trading day, the check will fall-back to the previous closing price.*

## 2.3 Gross traded value limit

A limit may be assigned on the total value traded by a participant during a single trading day. The limit is specified in Euros with trade values all normalised to Euros using the applicable FX rate from the previous trading day. Once this limit is breached then, for the target participant, all open orders are cancelled and all new orders are rejected until either the end of that trading day, or approval is received by Equiduct Market Control to increase the value limit and resume trading.

The value limit may be adjusted up or down intraday on request to Equiduct Market Control. If the limit is reduced below the current gross traded value for the target participant, the participant will be immediately prevented from trading.

*The calculation of gross traded value and, where necessary, the action to halt trading for a participant, is implemented downstream of the Equiduct Matching Engine meaning that there will be a small, but non-zero, delay between the first trade which breaches the limit and the action to prevent further trading. Based on current system performance this delay is expected to be well under 1 millisecond, but during this delay it is possible for the participant to submit further orders and for these orders to trade, or for passive orders from the target participant to be hit and traded by aggressive orders from other firms.*

Prior to a traded value breach, emails can be generated to notify that a significant fraction of the configured limit has been utilised. The initial threshold, which defaults to 50%, can be configured on request. Subsequent warning emails will be generated at 10% increments up to the 100% limit.

## 2.4 Trade drop copy session

The trade drop-copy session is a FIX session (port) which will receive copies of all trades and trade cancels (FIX Execution Report messages) for the configured “managed” trading participant. The managed participant is prevented from entering orders in the morning before the drop-copy session logs on, and if the drop-copy session disconnects during the trading day then the managed participant has all open orders cancelled and new order entry is blocked. In such cases, after an intraday disconnection and reconnection of the drop-copy session, Equiduct Market Control can, on request, allow the managed participant to resume trading.

## 2.5 Instruments Restrictions

The standard setup on Equiduct is that market participants are enabled for trading on a per-market-segment (i.e. per-primary-market) basis and, once enabled for a segment, are permitted to trade on any instrument within that segment. As an additional risk management facility, participants and authorised facilitators may restrict trading, either by specifying a list of instruments to enable with any non-specified instruments disabled or vice versa.

Initial setup can be achieved by emailing a csv file to Equiduct Market Control as in the example below. Note that the non-existent symbol *“DEFAULT”* is used to specify the default setting for a given market segment.

Participant	Primary Market	Currency	Maximum Order Value
FIRM1	XLON	EUR	10,000,000
FIRM1	XPAR	EUR	150,000
FIRM1	XLIS	EUR	50,000

On request via email or telephone, Equiduct Market Control are able to intervene intraday to disallow trading in one or more symbols or to add permitted symbols (with the restriction that the trading participant must already have appropriate configuration in place to allow trading on the relevant market segment on Equiduct). Application of a full csv file of changes is only possible overnight.

## 2.6 Confirmation of changes

Equiduct will provide an automated report confirming the currently effective risk management configuration for a given trading participant. This report will be generated and distributed via email after any intraday changes are applied and can also be scheduled for daily distribution before the start of the trading day.

## 3 Risk Management Portal

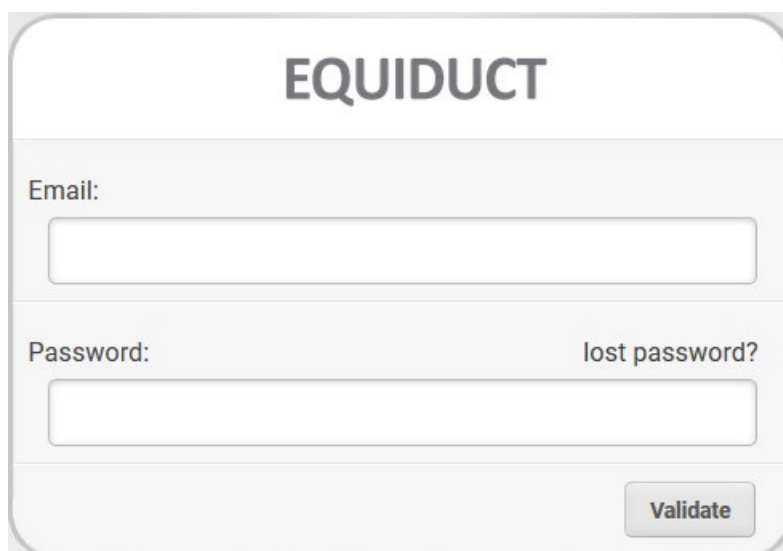
A Risk Management Portal is offered by Equiduct, for use by trading participants and third parties authorised to do so by participants, such as general clearing members (GCMs) and other post-trade facilitators.

### 3.1 Logging In

Navigate to the following URL:

<https://www.equiduct.com/en/clientportal/login>

You will be faced with the below login screen:



The screenshot shows a login interface for Equiduct. At the top, the word "EQUIDUCT" is displayed in a bold, sans-serif font. Below this, there are two input fields. The first is labeled "Email:" and is empty. The second is labeled "Password:" and is also empty. To the right of the password field, there is a link that says "lost password?". At the bottom right of the form, there is a button labeled "Validate".

Authorised personnel can sign in using their email address with the corresponding password provided by Market Control.

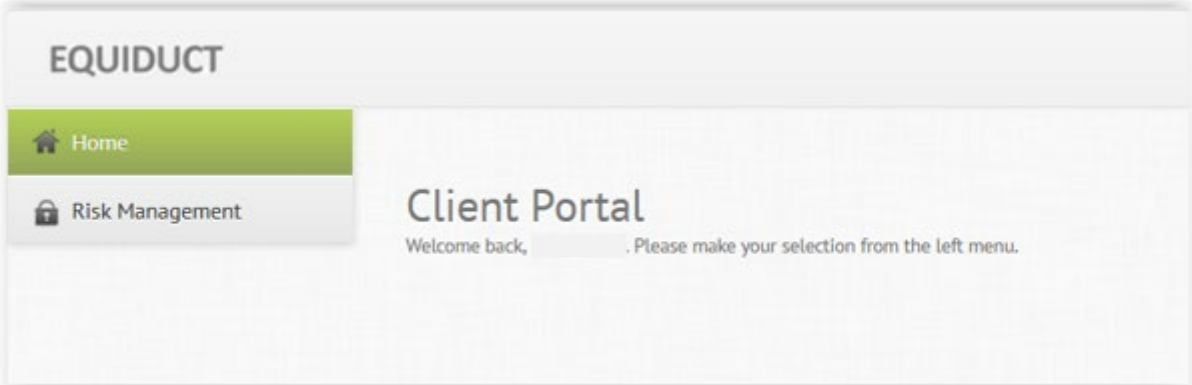
The next screen that you see will display QR code for you to scan with your Google (or your preferred) Authenticator App on your smartphone (follow the directions on your phone). Once you confirm this, the screen will then ask for a 6-digit One Time Password, which will be displayed on your phone.





### 3.1 Risk Management Portal Home Screen

Once logged in successfully you will be faced with the following risk management portal home screen:



## 3.2 Risk Management Parameters

Select the Risk Management menu option on the left-hand side, which will bring up the following screen:

Click on the Participant drop down and select your 4-character participant mnemonic from the participant drop down list to view the relevant risk parameters as described in Section 2.

### Participant Settings

Participant ID	Board ID	Max Order Quantity	Order Nominal Value	Limit Price Threshold	Gross Traded Limit	Net Traded Limit	Allow Market Orders	Offset Value Limit	Overseer Participant ID	Overseer Type	Actions
EQOB		250,000	1,000,000.00	3.00	50,000,000.00	50,000,000.00	True	200,000.00	EQDT	Enabled by SOD	
EQOB	ETFP_E_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	MTAA_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	MTAA_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XAMS_E_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XAMS_E_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XAMS_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XAMS_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XBRU_E_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XBRU_E_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XBRU_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XBRU_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XCSE_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XCSE_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XETR_2_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XETR_4_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XETR_4_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XETR_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XETR_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XHEL_HYB	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	
EQOB	XHEL_PEX	0	0.00	0.00	0.00	0.00	False	0.00		No overseer	

You edit edit some of these parameters by clicking the pencil icon on the right-hand side.

### 3.3 Kill Switch

In the top right of the screen a “Suspend Participant – ABCD” button is displayed and highlighted in red. This is the Kill Switch that will send an admin action directly to the system, suspending their activity on Equiduct.

Suspend Participant - EQOB

Should it ever be necessary to kill the relevant flows, always contact Market Control immediately via the telephone and back up any communication via email. This initial contact will ensure that we’re aware of the situation and can monitor closely. The killing of the flow is instantaneous, and Market Control will confirm the success of the action. The resumption of trading activity requires manual intervention from Market Control.

Market Control contact details are:

[marketcontrol@equiduct.com](mailto:marketcontrol@equiduct.com) / +44 (0) 203 595 1515

### 3.4 Portal Session Timeout

As the portal has a kill switch and other invasive actions that can affect live trading of a participant on Equiduct, a stringent timeout period is enforced to ensure that there are no unwanted consequences from leaving a screen unattended.

### 3.5 Constant Evolution

We are constantly looking at ways of enhancing the portal, so if you have any feedback at all, please let us know and they will be considered in any future plans.