



Equiduct Market configuration

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1 Market Segmentation

Equiduct determine the segment to which an instrument belongs by using the Average Daily Turnover (ADT) value as published by ESMA.

The market segment determines the instrument’s MQS (Minimum Quote Size) and maximum spread.

Market Segmentation based on Average Daily Turnover

Equiduct segment	ADT	MQS	Max spread* (Offer-Bid)/Mid
Segment 1	>100M Euro	EUR 10,000	10%
Segment 2	10M Euro – 100M Euro	EUR 5,000	15%
Segment 3	<10M Euro	EUR 2,500	20%

* The enforcement of the Maximum Spread Rule by Market Surveillance may be waived if the spread on the Home Market is outside of the parameters set for an affected instrument.

2 MQS (Minimum Quote Size & Maximum Spread Rules)

MQS is maintained at an instrument level using the number of shares, rather than the EUR cash equivalent. The following rounding methodology is also applied:

- MQS equivalent to <1 share – Round up share quantity to 1 share.
- MQS equivalent to <5 shares – Round down share quantity to the nearest 1 share.
- MQS equivalent to <100 shares – Round down share quantity to the nearest 5 shares.
- MQS equivalent to between 100 and 1000 shares – Round down to nearest 100 shares.
- MQS equivalent to >1000 shares – Round down to nearest 1000 shares.

3 Market Segment review process

A review of each of Equiduct market segments takes place every month.

Changes made as a result of the market segment review process are effective on the first Monday of each month, with notice of changes provided to market participants via a Market Notice 5 trading days before application.

The data cut-off date for inclusion in the market segment review will be the Friday, one week prior to the Friday on which the Market Notice advising market participants of changes is published. On this day, instrument closing prices are recorded, converted to Euros where necessary, the exchange rate recorded at market close and the average ADT is taken, in Euros, for the previous 20 trading days. An example of the review process timeline is shown below:

Data cut-off date: Friday 22/11/2019

Market Maker notification: Friday 29/11/2019

Effective date of changes: Monday 02/12/2019

Changes may be made to:

- Market Segment Allocation
- Minimum Quote Size
- Maximum Spread Rule

4 Market Maker Requirements

For an instrument to be eligible in the Apex or SpotVBBO services a Liquidity Provider must be a Market Maker for the instrument in question. A Market Maker must maintain firm and executable two-sided quotes in the Central Limit Order Book (CLOB) in line with the Equiduct Market Rules and Terms and Conditions. Within the Apex or SpotVBBO Services, Liquidity Providers are able to determine the risk limit to be configured on a per instrument and per counterpart basis. For instruments trading only in the CLOB there is no requirement to have a Market Maker registered for the instrument to be tradable.

5 Minimum Lot Size

The Minimum Lot Size is set to 1 across in keeping with that of the reference markets covered by Equiduct.

6 Tick Size Allocation

6.1 Central Limit Order Book (CLOB)

Equiduct uses a dynamic set of tick size parameters based on liquidity bands set by ESMA. The liquidity band an instrument falls into is determined by its Average Daily Number of Transactions (ADNT), which is calculated and published by the National Competent Authority for the relevant instrument. ETFs with an equity underlying will be assigned the tick range corresponding to the highest Average Daily Number of Transactions as detailed in the table below.

Liquidity Bands						
Price ranges	$0 \leq \text{ADNT} < 10$	$10 \leq \text{ADNT} < 80$	$80 \leq \text{ADNT} < 600$	$600 \leq \text{ADNT} < 2000$	$2000 \leq \text{ADNT} < 9000$	$9000 \leq \text{ADNT}$
$0 \leq \text{price} < 0.1$	0.0005	0.0002	0.0001	0.0001	0.0001	0.0001
$0.1 \leq \text{price} < 0.2$	0.001	0.0005	0.0002	0.0001	0.0001	0.0001
$0.2 \leq \text{price} < 0.5$	0.002	0.001	0.0005	0.0002	0.0001	0.0001
$0.5 \leq \text{price} < 1$	0.005	0.002	0.001	0.0005	0.0002	0.0001
$1 \leq \text{price} < 2$	0.01	0.005	0.002	0.001	0.0005	0.0002
$2 \leq \text{price} < 5$	0.02	0.01	0.005	0.002	0.001	0.0005
$5 \leq \text{price} < 10$	0.05	0.02	0.01	0.005	0.002	0.001
$10 \leq \text{price} < 20$	0.1	0.05	0.02	0.01	0.005	0.002
$20 \leq \text{price} < 50$	0.2	0.1	0.05	0.02	0.01	0.005
$50 \leq \text{price} < 100$	0.5	0.2	0.1	0.05	0.02	0.01
$100 \leq \text{price} < 200$	1	0.5	0.2	0.1	0.05	0.02
$200 \leq \text{price} < 500$	2	1	0.5	0.2	0.1	0.05
$500 \leq \text{price} < 1000$	5	2	1	0.5	0.2	0.1
$1000 \leq \text{price} < 2000$	10	5	2	1	0.5	0.2
$2000 \leq \text{price} < 5000$	20	10	5	2	1	0.5
$5000 \leq \text{price} < 10000$	50	20	10	5	2	1
$10000 \leq \text{price} < 20000$	100	50	20	10	5	2
$20000 \leq \text{price} < 50000$	200	100	50	20	10	5
$50000 \leq \text{price}$	500	200	100	50	20	10

6.2 Apex and Zenith trading services

Equiduct utilises a tick size of 0.0001 for all Apex and SpotVBBO VWAP calculations.

Apex and SpotVBBO Tick Size	
99999999 <	0.0001

7 Trading Calendar and business hours

The Equiduct Trading Calendar follows the trading calendar of the Home Markets and will be published on the Equiduct website.

The trading hours of Equiduct are as follows (all times are in CET):

09:00 – Equiduct Opening Cross: At 08:59:59 Equiduct will enter the Open Freeze period at which point the entry, amendment and cancellation of orders prior to the start of continuous trading is not permitted and Market Maker Quotes will be closed. Please note that in the case of Euronext Home Market ETFs the open Freeze will not commence until 09:04:59 to reflect the later opening time of 09:05:00 for these instruments. As the Home Market Open price is received for each instrument, all interest with a limit price strictly better than the Home Market Open price will be executed at this price. Interest with a limit price matching the Home Market Open price will be executed to the extent that it was possible to execute each order on the Home Market. Each instrument will transition to continuous trading within 30 seconds of the opening price being received from the Home Market.

If no Open Price is received from the Home Market then the system will wait until 1 minute prior to the close call, or until the market state changes to open. At this point Equiduct will perform an auction to uncross the CLOB and will then immediately transition to continuous trading.

09:00 – 17:30 – Continuous Trading: Instruments will remain in Continuous Trading in line with the Home Market trading status and with the exceptions of Unscheduled auctions on the Home Market (during which the instrument will be halted on Equiduct, to resume trading following a 5 second uncrossing auction to which a random end of 5 seconds is applied) and any Price Monitoring Interruption (PMI) initiation caused by deviation of Equiduct trade prices from the Mid of the EBBO.

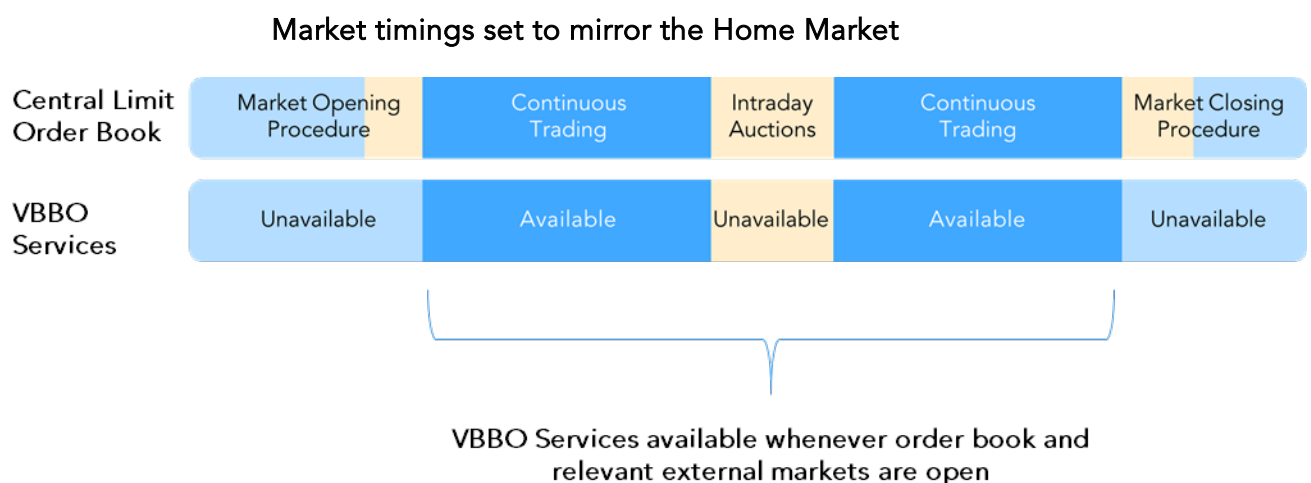
13:00 – 13:16 – LSE Intraday Auction: LSE SETS Home Market Instruments traded on Equiduct will be halted in line with the 2-minute auction call period on the Home Market.

During this time, the Home Market books will be unavailable. Following the 2-minute auction period there will be a 30 second random uncrossing. As each instrument transitions back to continuous trading affected instruments will enter a 5 second auction phase on Equiduct and will resume trading following this auction plus a random end time of up to 5 seconds.

13:00 – 13:20 – Xetra Intraday Auction: Xetra Home Market Instruments traded on Equiduct will be halted in line with the intraday auctions held on the Xetra Market. As each Xetra Market Segment transitions back to continuous trading, affected instruments will enter a 5 second auction phase on Equiduct and will resume trading following this auction plus a random end time of up to 5 seconds.

17:25 – 17:40 – Equiduct Closing Cross: Continuous trading ends in line with the Home Market but order entry, amendment and cancellation is still permitted until the start of the Close Freeze which occurs 1 second prior to the usual uncrossing time of the Home Market Closing Auction, at which time Market Maker quotes are closed. All interest with a limit price strictly better than the Home Market Close price will be executed at this price, while interest with a limit price matching the Home Market Close price, will be executed to the extent that this was possible on the Home Market. Executions will occur within 30 seconds of the receipt of the closing price from the Home Market.

If no Close Price is received from the Home Market then the system will wait until 17:40:01 and then perform an auction to uncross any cross that may exist between orders in the book.



8 SMS & RMS Quantities (Standard and Retail Market Size)

The RMS share quantity is always the number of shares equivalent to Euro 7,500 rounded to the nearest share and is available for every instrument available for trading on Equiduct.

The SMS quantity is the number of shares equivalent to the instrument's SMS value. The RMS and SMS quantities (where available) are the numbers of shares for which the Equiduct VBBO is calculated for each instrument.

The Standard Market Size (SMS) for shares, depositary receipts and ETFs shall be determined based on the Average Value of Transactions (AVT) for each financial instrument. The AVT is calculated and published by the National Competent Authority responsible for that instrument.

Competent Authorities shall use the following criteria when calculating the AVT:

- a. it shall take into account the transactions executed in the Union in respect of the financial instrument concerned whether executed on or outside a trading venue;
- b. it shall cover either the preceding calendar year or, where applicable, the period of the preceding calendar year during which the financial instrument was admitted to trading or traded on a trading venue and was not suspended from trading;
- c. it shall exclude post-trade large-in-scale transactions.

Standard Market Size shall be applied according to the following AVT bands:

Average value of transactions (AVT) in EUR	AVT < 20,000	20 000 ≤ AVT < 40,000	40 000 ≤ AVT < 60,000	60 000 ≤ AVT < 80,000	80 000 ≤ AVT < 100,000	100 000 ≤ AVT < 120,000	120 000 ≤ AVT < 140,000	Etc.
Standard market size	10,000	30,000	50,000	70,000	90,000	110,000	130,000	Etc.

9 Cancellation of orders

Orders will be cancelled on behalf of the submitting Order Flow Provider (OFP) only in the following circumstances:

- Dividend Ex-Date – Any orders resting in the CLOB overnight where an instrument is going ex-dividend on the following day will be cancelled prior to market open.
- Corporate Action Last Cum Date – Any orders resting in the CLOB for an instrument undergoing one of the following price adjusting corporate actions are cancelled after market close on the day prior to the corporate event becoming effective. Only in the event of orders still resting in the book on the ex-date of a corporate action, as defined below, will Equiduct expire these orders automatically before market open.

Instruments undergoing the following corporate actions will be affected:

- Spin Off/Demerger (Orders cancelled for Parent Line)
 - Capital Repayment
 - Split/Reverse Split
 - Bankruptcy
 - Delisting
 - ISIN Change
 - Change of listing to ineligible market
- Loss of Connectivity - In the event of an OFP losing connectivity to the Equiduct Trading System, Market Control have the ability to cancel orders on explicit request from the OFP in line with operational procedures. The automatic cancellation of orders and quotes following a disconnection can be configured on request.
 - Change of Instrument Tick Size - Any changes to the tick size applicable to an instrument that affects the validity of orders resting in the CLOB will be communicated to affected members prior to the effective date of the change. If orders remain in the book with an invalid limit price on the effective date, these will be cancelled from the CLOB.
 - Change of Minimum Iceberg Peak Size - Any changes to the minimum iceberg peak size, following the monthly market segmentation review, will be communicated via market notice at least 5 trading days prior to the effective date of the change and will be available for download from the website. Any iceberg orders remaining in the book with an invalid iceberg peak size will be cancelled from the CLOB.

Other Cancellations - Excluding the scenarios outlined above, Equiduct will not cancel resting orders from the CLOB.

10 Minimum peak size and minimum total value for an Iceberg Order

The peak size for an iceberg order is equal to the instruments MQS value which is published in the Instrument list on the Equiduct Website.

The minimum total value for an iceberg order entry is EUR 10,000. Any amendments to an iceberg order once it has been entered must be in line with the original minimum size requirement. This applies to both size and limit price amendments.

11 Trading of instruments in multiple currencies

Instruments on Equiduct are identifiable by their unique Equiduct Symbol which relates to a specific trading market. The trading market can be determined using the suffix attached to the Equiduct Symbol. See the below table for the suffix applicable to each market:

Trading Market	Symbol Suffix
XLON	l
XPAR	p
MTAA	m
XBRU	b
XLIS	u
XAMS	a
XSTO	s
XCSE	c
XMCE	e
XETR	d
XHEL	h

Each instrument determinable by its unique Equiduct Symbol is traded in one currency only. The VBBO for each instrument is calculated using the market depth from the consolidated European order book, (Equiduct and reference markets), only in the currency in which the instrument trades. This negates the need for real time currency conversions within Equiduct for instruments traded in multiple currencies throughout the European reference markets

covered by Equiduct, removing any element of risk that automatic currency conversions may present to Equiduct participants.

For instruments with sufficient liquidity in more than one currency, Equiduct will provide a second unique symbol allowing Market Participants to trade in the second currency via Equiduct. In such cases the VBBO will only consider market depth from the relevant European reference markets in the currency in which the instrument is being traded.

For example:

Royal Dutch Shell A is traded on BATE, CEUX, CHIX, TRQX, TQEX,, the London Stock Exchange and Euronext. As a company, Royal Dutch Shell A will be traded via Equiduct in EUR and GBX with VBBO Calculation as follows:

Royal Dutch Shell A traded in GBX – Symbol RDSA1

VBBO prices are calculated using market depth from Cboe Europe (BXE and CXE), the London Stock Exchange and Turquoise, all of which trade Royal Dutch Shell A in GBX.

Royal Dutch Shell A traded in EUR – Symbol RDSAa

VBBO prices are calculated using market depth from Cboe NL (DXE), Euronext and Turquoise Europe (TQEX), all of which trade Royal Dutch Shell A in EUR.

11.1 Trading multi-listed ISINs

Equiduct supports trading at the VBBO for instruments which are listed in the same currency, with the same ISIN, on multiple European markets.

For example:

STMICROELECTRONICS (NL0000226223) is tradeable in EUR on Paris (symbol STMp) also in EUR on Milan (symbol STMm).

12 Price monitoring

PMI – Price Monitoring Interruptions – Price monitoring interruptions prevent price movements (trades) outside of a predefined tolerance set at instrument level and can only occur during continuous trading. PMIs will occur before a trade which would breach the configured tolerance from the mid-price of the reference markets' BBO. The PMI auction period duration is 30 seconds plus REAP (see below) of up to 5 seconds. If the theoretical auction price at the end of the auction period remains outside the PMI tolerance, Price

Monitoring Extensions (see below) will occur until the auction price is within tolerance or the book uncrosses without an auction.

PME – Price Monitoring Extensions – Price monitoring extensions occur when the theoretical auction price at the end of an intraday auction phase breaches the PMI tolerance for the instrument in question (see above). Extensions are configured to last 30 seconds and will continue indefinitely until the auction price is within the PMI tolerance or the book uncrosses without an auction.

MOE – Market Order Extensions – If at the end of an auction period there are market orders that remain unexecuted in the HybridBook at the calculated auction price, a market order extension will occur. This provides Market Participants with the opportunity to execute orders against the remaining market orders at the price determined in the auction. One MOE is allowable per auction period, lasting 30 seconds.

REAP – Random End to Auction Periods – All auction periods have a random end which occurs within 5 seconds of the configured interval.

13 Order-to-trade ratio

The order-to-trade ratio is determined in accordance with the Delegated Regulation (EU) 2017-566 of the Commission of 18 May 2016 for the ratio between non-executed orders and aims to prevent disruptive trading conditions.

13.1 Methodology

- (a) in volume terms: $(\text{total volume of orders} / \text{total volume of transactions}) - 1$;
- (b) in number terms: $(\text{total number of orders} / \text{total number of transactions}) - 1$.

In the case of a) the above delegated regulation (volume calculation) does not exceed 200,000,000 for approved Market Makers and Liquidity Providers and does not exceed 20,000,000 for order flow providers.

In the case of b) the above delegated regulation (number calculation) the ratio may not exceed 5,000,000 for approved Market Makers and Liquidity Providers and does not exceed 500,000 for order flow providers.