Chi-X Europe Exchange Guide

Market Coverage:	Pan-European Securities Trading Venue
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Market Hours:	08.00 until 16.30 UK time
Currencies Quoted:	GBp, EUR, NOK, DKK, SEK, CHF, USD
Overview of Market Structure:	Chi-X Europe Ltd (Chi-X) is an FSA authorised Multilateral Trading Facility (MTF) passported across the European Economic Area (EEA). Chi-X is a venue for professional investors to trade pan-European securities anonymously. Two orders books are available: a Central Limit Displayed Order Book ("Visible Book"), and a Non-Displayed Order Book ("Chi-Delta") for the trading of reference pegged non-displayed orders.

Trading Schedule

Period	Time	Action
Technical Connectivity	06:00 UK time	Participant system connectivity can occur. No order entry, modification or cancellation is permitted.
Trade Data Monitor Service Opens	06:30 UK time	Participants can contribute off-exchange trades to Chi-X for trade reporting.
Continuous Trading Period	08.00 until 16.30 UK time	Orders can be entered, modified and deleted. Trades occur continuously as orders match in price/time priority per normal trading behaviour.
Post Trading Administration Period	16:31 until 17:50 UK time	Orders can only be cancelled during this period. If required, Chi-X can send participants confirmation of trade cancellations.
Trade Data Monitor Service Closes	17:30 UK time	Any trades contributed after system close will be rejected. The participant will receive an out of hours reject message.
Technical Connectivity Ends	17:50 UK time	System closed, any untraded orders will be cancelled back to participants.

Market Data

Market Data	Via Chi-X data feed	On Thomson Reuters/Bloomberg & other third party vendors
Bid/Ask Data	Yes	Yes
Market Depth	Yes	Yes
VWAP and Turnover	No	Yes

Stock Universe

Centrally Cleared Securities

All securities that are available for trading by Trading Participants are centrally cleared through EMCF, the Chi-X central counterparty. These securities can be traded on both the visible book and the non-displayed book. The complete list is available here:

http://www.chi-x.co.uk/AboutUs_StockList.htm

Trade Reportable Securities List

Approximately 8,200 securities are available for trade reporting on Chi-X through the Trade Data Monitor service. The complete list is available here:

http://www.chi-x.com/CHIXTDM.TXT

Exchange Traded Funds (ETFs)

Selected ETFs are available for trading by Trading Participants. These are centrally cleared through EMCF, the Chi-X central counterparty. Full details are available here:

http://www.chi-x.co.uk/AboutUs_Chi-X_ETF.htm

Large in Scale criteria regarding non-displayed order types does not apply to trading ETFs.

Price Range Checking:

For each order a tolerance check is made against the last traded price of the stock on the primary market. Orders that breach the price checks will be automatically rejected. The tolerance check is only applied where the order is priced on the aggressive side of the spread, i.e. the tolerance check for buys is only applied when the price is higher than the last traded primary market price and the tolerance check for sells is only applied when the price is below the last traded primary market price.

The tolerance levels are standard across all stocks, varying according to size of the last traded primary market price as follows:

Direct Chi-X Members	Price equal or greater than a value of 3 currency units.	20% (non-configurable)
Direct Chi-X Members	Less than 3 currency units.	40% (non-configurable)
Sponsored Clients	Price equal or greater than a value of 3 currency units.	Tolerance level set by the Sponsoring Participant (maximum 20%)
Sponsored Clients	Less than 3 currency units.	Tolerance level set by the Sponsoring Participant (maximum 40%)

Lot Sizes:

Round Lot Size (RLS)	Based on the local market.
Minimum Order Size	Based on the local market RLS for the selected stock.

Time in Force Options

The following time in force values are available for order types across both the central limit order book, and the non-displayed order book:

Day Orders:	Orders are valid for the entire day
Good till date:	Used for setting intraday expiration times (Orders are only valid for one day)
IOC/FOK:	Orders are instantly executed or cancelled.

Note: all orders are automatically cancelled at the end of each trading day, in both books, regardless of order type.

Order Matching Priority

Visible Book: Orders are matched according to price, visibility, time.

Non-Displayed Book: Orders are matched according to time priority unless minimum quantity is set.

Minimum quantity orders will not execute if sufficient volume is not available to meet the minimum quantity of that order. As a result, other orders in this stock may execute prior to the minimum quantity order, even if they were received later.

An order received in the non-displayed book (whether minimum quantity is set or not) that matches or exceeds the minimum quantity of an opposing order will be prioritised for matching. This will mean the lowest number of executions possible for both those orders.

Central Limit Order Book (Visible Book)

Supported Instruction behaviour in the Central Limit Order Book:

Visible Order Types

Limit Order:	An order submitted to Chi-X with a specified price and size.
Market Order/Market Peg:	Market Orders and Market Pegged orders are orders which peg to the opposite side at a price equal to that on the primary market. The order may be priced or unpriced, and if priced the order will peg up or down to the specified limit.
Iceberg Order:	An order submitted to Chi-X with a specified price and size. A portion of this order, determined by the Trading Participant, is displayed. The remainder of this order remains non-displayed. The visible portion has price and time priority over other orders. The non-displayed portion has price priority over all orders. It has time priority over non-displayed orders, and the non-displayed portion of other iceberg orders, only.
Execute and Eliminate (IOC):	An order submitted to the Chi-X platform with a specified size and, optionally, a specified limit price which executes, in full or in part. Any unexecuted portion of this order will be automatically cancelled.
Fill or Kill Order:	An order submitted to the Chi-X platform with a specified size and, optionally, a specified limit price that executes in full against eligible orders or is automatically cancelled in its entirety.
Visible Mid Peg Order:	An order that will peg to the mid price on the Primary Market. The order may be priced or unpriced, and, if priced, the order will peg up or down to the specified limit.
Visible Primary Peg Order:	An order that will peg to the best bid or offer on the Primary Market. The order may be priced or unpriced, and if priced the order will peg up or down to the specified limit.

Non-Displayed Orders in the Central Limit Order Book (Visible Book)

Non-displayed orders for equities must meet large in scale requirements as defined by MiFID in order to be directed to the Central Limit Order Book. Orders that do not meet the Large in Scale size can only be directed to the Non-Displayed Order Book. Large in scale orders are defined in Table 2 of Annex 2 of the MiFID Implementing Regulation as follows (all figures in EUR):

Average Daily Turnover (ADT)	ADT< 500,000	500,000 ≤ ADT < 1,000,000	1,000,000 ≤ ADT < 25,000,000	25,000,000 ≤ ADT < 50,000,000	ADT ≥ 50,000,000
Minimum size of order qualifying as large in scale	50,000	100,000	250,000	400,000	500,000

CESR publishes a list which details the ADT for most stocks that trade on the Chi-X Europe Ltd platform. This can accessed at this web link:

http://mifiddatabase.cesr.eu/Index.aspx?sectionlinks_id=14&language=0&pageName=MiFIDLiquidSearch

Large in scale requirements are not applicable to ETFs or to the following Swiss stocks:

Name	Chi-X	ISIN	UMTF Code
ACTELION HOLDING N ORD	ATLN.I	CH0010532478	ATLNz
GAM Holding Ltd	GAMS.I	CH0102659627	GAMz
GEBERIT AG	GEBN.I	CH0030170408	GEBNz
GIVAUDAN SA	GIVN.I	CH0010645932	GIVNz
Julius Baer Group	BAER.I	CH0102484968	BEARz
KUEHNE & NAGEL	KNIN.I	CH0025238863	KNINz
LONZA GROUP AG	LONN.I	CH0013841017	LONNz
ROCHE HOLDING G PAR	ROCG.I	CH0012032048	ROGz
SGS SA	SGSN.I	CH0002497458	SGSNz
SWATCH GROUP ORD	UHRZ.I	CH0012255151	UHRz
SYNTHES ORD	SYST.I	US87162M4096	SYSTz

Non-Displayed Order Types in the Central Limit Order Book (Visible Book)

Hidden Order: An order that is only visible to the participant that submitted the order and to Chi-X. The order takes price priority over all orders. It has time priority over other non-displayed orders, and the non-displayed portion of iceberg orders, only.

Hidden Market Peg Order: Market Orders and Market Pegged orders are only visible to the participant and peg to the opposite side at a price equal to that on the primary market. The order may be priced or unpriced, and if priced the order will peg up or down to the specified limit.

Hidden Mid Peg Order: An order that is only visible to the participant that submitted the order and to Chi-X that pegs to the mid price on the Primary Market. The order may be priced or unpriced, and, if priced, the order will peg up or down to the specified limit.

Hidden Primary Peg Order: An order that is only visible to the participant that submitted the order and to Chi-X that pegs to the best bid or offer on the Primary Market. The order may be priced or unpriced, and if priced the order will peg up or down to the specified limit.

NB: The above does not apply to trading ETFs and the above Swiss stocks. Non-displayed ETF, selected Swiss stocks and order types of any size will be entered into Chi-X Central Limit Order Book, unless it has a minimum quantity, in which case it will be sent to Chi-Delta.

Chi-Delta

Chi-Delta is a stand alone "Non-Displayed Book" that has been designed to comply with MIFID's reference price pre-trade transparency waiver for non-displayed orders. It is a continuously matching order book that supports matching at the mid-peg reference price. The current reference price is the Primary Market Best Bid and Offer price (PBBO), the price on the primary listing venue for the security in question.

Chi-Delta also supports minimum quantity orders.

Trading Hours

The trading hours for each stock on Chi-Delta are the same as the continuous trading period on the primary market for that stock. In the event that a stock is not in continuous trading, for example, it enters an auction on the primary market, new orders are accepted, but put into a hold status. Existing orders are removed from the matching algorithm and put into a hold status. Upon resumption of continuous trading on the primary market orders will be reinstated, and all orders will be removed from the hold status.

Order Matching Behaviour

All orders in Chi-Delta are matched at the mid peg price. If this peg type is not applied by the Trading Participant then this peg type will automatically be applied by Chi-X.

Mid point matching can result in execution prices being at half tick levels if the primary market quote is an odd number of ticks wide.

Minimum Quantity Behaviour

Chi-Delta supports the Minimum Quantity order attribute and is communicated by Participants via the use of FIX Tag 110 (MinQty). A value greater than zero communicated in MinQty constrains the quantity that can be matched against the order (in one or more consecutive executions) to the value specified. This behaviour persists for the life of the order with the only exception being where residual order quantity is less than the MinQty of the order. In this scenario MinQty is reset to the residual amount.

Supported Instruction behaviour in the Non-Displayed Order Book (Chi-Delta):

Hidden Order: A non-displayed order submitted to Chi-Delta with a specified size. Chi-X will automatically apply a mid-peg to these orders. Any unexecuted portion of the order will rest on Chi-Delta at the mid-peg.

Hidden Mid Peg Order: A non-displayed order submitted to Chi-Delta with a mid peg already applied by the Trading Participant. Any unexecuted portion of the order will rest on Chi-Delta at the mid-peg.

Hidden IOC Order: A non-displayed order submitted to Chi-Delta with a specified size which executes in full or in part. The unexecuted portion of this order will be automatically cancelled. Chi-X will automatically apply a mid peg to Hidden IOC orders.

Hidden Fill or Kill Order: A non-displayed order submitted to Chi-Delta with a specified size that executes in full or is automatically cancelled in its entirety. Chi-X will automatically apply a mid peg to Hidden Fill or Kill orders.

Post Trade Transparency

Post trade transparency is achieved by the real time dissemination of the Chi-Delta trades on the consolidated Chi-X market data feed. The existing message type for non-displayed executions will be reused for Chi-Delta executions. Further information on how vendors and participants can differentiate Chi-Delta executions from LIS non-displayed executions is available on request.

Routing Logic

Chi-X will automatically route orders to either the Central Limit Displayed Order Book, or the Non-Displayed Order Book depending on the order characteristics. These are detailed in the table below:

Displayed/ Non-Displayed	Pegged Order	Minimum Quantity	LIS or above	Result
Displayed	-	No	-	Routed to visible book
Displayed	-	Yes	-	Order Rejected. Minimum Quantity not supported in visible book
Non-Displayed	Yes	-	No	Routed to the non-displayed book
Non-Displayed	Yes	No	Yes	Routed to visible book as a non-displayed order
Non-Displayed	Yes	Yes	Yes	Routed to the non-displayed book
Non-Displayed	No	-	No	Routed to the non-displayed book. Mid peg will be applied to the order automatically
Non-Displayed	No	No	Yes	Non-IOC/FOK Orders: Routed to visible book as a non-displayed order IOC/FOK Orders: Routed to the non-displayed book. Mid peg will be applied to the order automatically
Non-Displayed	No	Yes	Yes	Routed to the non-displayed book. Mid peg will be applied to the order automatically

NB: The LIS for ETFs and certain Swiss stocks (see page 7) is set at zero, therefore any non-displayed order in these securities will be directed to the visible book unless a minimum quantity is applied.

Price Increments – UK Securities FTSE 100 and FTSE 250(except for securities listed below)

The tick sizes for FTSE 100 and FTSE 250 securities vary by order entered price according to the following table (note: exceptions to this table are noted below):

Price Range	Tick Size
0.0001 – 0.4999	0.0001
0.5000 – 0.9995	0.0005
1.000 – 4.999	0.001
5.000 – 9.995	0.005
10.000 – 49.99	0.01
50.00 – 99.95	0.05
100.00 – 499.90	0.10
500.00 – 999.50	0.50
1000.00 – 4,999	1
5,000 – 9,995	5
10,000+	10

Price Increments – Exceptions to above FTSE 100 and FTSE 250

The tick sizes for the following securities: AAL.L, AZN.L, BARC.L, BLT.L, BP.L, BT.L, GSK.L, HSBA.L, LLOY.L, RDSA.L, RIO.L, VOD.L vary by order entered price according to the following table:

Price Range	Tick Size
0.0001 – 0.9999	0.0001
1.0000 – 4.9995	0.0005
5.000 – 9.999	0.001
10.000 – 49.995	0.005
50.00 – 99.99	0.01
100.00 – 499.95	0.05
500.00 – 999.90	0.10
1000.00 – 4999.50	0.50
5,000 – 9,999	1
10,000 +	5

Price Increments – UK Securities (except the indices and exceptions listed above)

Price Range	Tick Size
0.01 – 9.99	0.01
10.00 - 499.75	0.25
500.00 - 999.50	0.50
1000.00	1.00

Price Increments – UK Securities For EUR and USD denominated securities (except the indices and exceptions listed above)

Price Range	Tick Size
0.0001 – 0.9999	0.0001
0.1 – 4.9975	0.0025
5.0 – 9.995	0.005
10.00	0.01

Price Increments – UK Securities (cont.)	Exceptions to the dynamic tick tables:

iSHARES FTSE 100 ETF	0.10
Lyxor ETF FTSE100	0.010
iSHARES-S&P 500 Index	0.250
iSHARES MSCI Emerging Markets	0.250
iSHARES MSCI Brazil	0.250
ETFS Physical Gold $	0.01
ETFS Physical Gold £	0.01
ETFS Physical Silver $	0.0025
ETFS Physical Silver £	0.01
Gold Bullion Securities $	0.01
Gold Bullion Securities £	0.01

Price Increments - French (CAC40 / CAC Next 20 / SBF120), Dutch (AEX 25 / AMX 25), Belgian (BEL20) and Portuguese (PSI 20) Securities

Price Range	Dynamic Tick Size
0 – 9.999	0.001
10.00 – 49.995	0.005
50.000 – 99.99	0.01
100.00+	0.05

Price Increments – Norwegian (OBX 25).

Price Range	Tick Size
0.0001 – 0.4999	0.0001
0.5000 – 0.9995	0.0005
1.000 – 4.999	0.001
5.000 – 9.995	0.005
10.000 – 49.99	0.01
50.00 – 99.95	0.05
100.00 – 499.90	0.10
500.00 – 999.50	0.50
1000.00 – 4,999	1
5,000 – 9,995	5
10,000+	10

Price Increments – Eurozone (except the indices listed above and Italy). Denmark and Norwegian (OTHER).

Price Range	Dynamic Tick Size
0.001 – 9.999	0.001
10.00+	0.005

Price Increments – Eurozone (except the indices listed above and Italy).	Exceptions to the dynamic tick table:

AGFA.I	0.001
NYR.I	0.001
CBKG.I	0.001
DPWG.I	0.001
DTEG.I	0.001
IFXX.I	0.001
LHAG.I	0.001
TUIG.I	0.001

Price Increments – Swiss and Swedish Securities

The tick sizes for Swiss securities vary by order entered price according to the following table:

Price Range	Tick Size
0.005 - 99.995	0.005
100.00 - 249.99	0.010
250.00 - 499.975	0.025
500.00 - 999.95	0.050
1000.00 - 4999.90	0.100
5000.00+	0.500

The tick sizes for Swedish securities vary by order entered price according to the following table:

Price Range	Tick Size
0.005 -14.995	0.005
15.000 – 99.990	0.010
100.000 – 499.950	0.050
500.000 – 4999.750	0.250
5000+	0.500

Price Increments – Italian Securities	The tick sizes for Italian securities vary by order entered price according to the following table:

Price Range	Tick Size
0.0001 – 0.2499	0.0001
0.2500 – 0.9995	0.0005
1.0000 – 1.9990	0.0010
2.0000 – 4.9975	0.0025
5.0000 – 9.9950	0.0050
10.0000+	0.0100

Clearing and Settlement:

Settlement Type	Period
Normal settlement cycle for Chi-X	T+3 for all markets except Germany, which is T+2