

Market Guide

General Information, Order & Routing Instructions

European Equities

Overview

Cboe Europe Equities is a Recognised Investment Exchange (RIE) for pan-European securities, which consists of two anonymous central Integrated order books, with visible and non-displayed liquidity, and two dark order books with non-displayed liquidity only. Cboe also offers a separate order routing service. The order routing service is only available to clients who are Participants of the RIE and who are categorised as Eligible Counterparties.

The Cboe platform is internally developed by a dedicated team of market and technology professionals to cater to the needs of the European trading community. The Cboe platform is hosted in a world-class data centre in Equinix Slough (LD4).

Markets Traded

Cboe offers trading in UK, Austrian, Belgian, Danish, Dutch, Finnish, French, German, Italian, Irish, Norwegian, Portuguese, Spanish, Swedish and Swiss markets, Exchange Traded Funds, Exchange Traded Commodities, Exchange Traded Currencies and Depositary Receipts. Smart Order Routing is available for all markets traded except Irish and Spanish.

Trading Hours

Continuous 08:00-16:30; ETR 07:50-18:00 (UK); Off-Exchange 07:15-17:15 (UK). Generally, Cboe follows local market trading calendars. For a full list of hours and holidays, please see our website.

Clearing & Settlement Cboe Participants have the choice of a clearer from an interoperating group of three CCPs: EuroCCP NV, LCH.Clearnet and SIX x-clear. The interoperable group covers all pan-European markets with the exception of Spain and does not cover ETFs. Participants will need to maintain clearing arrangements with any relevant CCP. Where a transaction occurs between two Participants, each leg of the transaction will be sent to the Participant's respective Interoperable CCP of choice. Clearing arrangements, either directly or via a General Clearing Participant (GCP), must be in place prior to trading.

Reference Data

Tick Size

Tick sizes are generally in-line with the primary market. For specific tick sizes in each market, refer to Cboe Tick Sizes and for details on reference data, refer to the Reference Data Specification.

MIC

The Market Identification Code for BXE is BATE; CXE is CHIX. The Sub-MIC for BXE is BATD; CXE is CHID to identify dark order book

TSO Flag B (BXE and cross book settlements); N (CXE)

Vendor Suffix

Bloomberg - BXE is .EB, CXE is .IX; Reuters - BXE is .BS, CXE is .CHI

Connectivity

Extranet, Point-to-Point, Cross Connect and Co-Location. For further details, refer to the Connectivity Manual.

Order Entry

FIX and Binary Order Entry (BOE) ports support order entry and advanced order types.

Real-Time, Depth of Book Market Data

Multicast Feed: Real-time depth of book and trade information. Low latency, up to 400 microseconds faster than TCP. TCP Feed: All publicly disseminated order, trade and administrative messages.

Drop Feed: Participant-only order, trade and cancel messages. Authorised firms may request this feed for multiple participants.

Symbology

Cboe supports the Uniform Symbology methodology. This symbology consists of an instrument code followed by a single, lower case letter designating the primary listing market centre.

Example:

Listing Market Centre	міс	Listing Market Code	Local Code	Uniform Symbology Code	Security Name
London Stock Exchange	XLON	l (Lowercase L)	VOD	VODI	Vodafone Group Ord.



Integrated Order Books
The Integrated order books provide advanced visible and non-displayed order types to participants with competitive pricing and pricetime priority.

Visible Order Types

Visible Limit Order: Limit orders allow you to buy or sell a security at a specified price or better. Time in Force (TIF) availability for limit orders.

- DAY; GTD (Good 'til Day) If not executed, cancelled at expire time or 16:30 (London).
- IOC (Immediate or Cancel) Remainder of the order not filled immediately is cancelled. Market orders are implicitly IOC. Minimum quantity is available with IOC orders.
- AtTheOpen & AtTheClose Participate in the Opening or Closing Auction, respectively.

Post Only Order: Post only orders allow you to make a market and specify not to remove liquidity. Any incoming post only orders that would cross with a resting passive order will be rejected.

Reserve Order (Iceberg): Reserve orders allow you to enter a limit order and only display a fraction of the order size. The entire size is available for execution. The reserve portion of the order is last in priority after visible and hidden orders.

Hidden Order Types*

Non-Displayed Limit Order (Hidden): Non-Displayed Limit Orders allow you to hide your limit order on the Integrated order books.

Peg Order Types*

Peg Orders: Peg to the PBBO** in four ways:

- Primary pegs to the same side of the PBBO as the order (both hidden and visible available)
- Market pegs to the opposite side of the PBBO from the order (both hidden and visible available)
- Midpoint pegs to the midpoint of the PBBO (hidden)
- Alternate Midpoint pegs to the less aggressive of the midpoint of the MBBO or one tick inside the same side of the PBBO (hidden)

Minimum quantity is available for hidden order types.

Interbook Order Types

Lit, Dark & Dark Lit Sweep: Access liquidity from both of Cboe's lit order books and/or both of its dark order books, via a single order.

Cboe Select Order Routing

The Integrated order books provide advanced visible and non-displayed order types to participants with competitive pricing and price-time priority.

Parallel Strategies

Parallel D - Best Price: Splits a routable order and sends it to multiple market centres simultaneously at the same price level. Liquidity is exhausted at each price level to the limit price.

Parallel 2D - Fastest Execution: Splits a routable order and sends it to multiple market centers and multiple price levels simultaneously.

Re-Route: Re-Route applies to orders that have completed the routing process resting on the Integrated order book. It monitors quotes from other market centres and proactively searches for more liquidity when marketable liquidity becomes available elsewhere.

Cboe + Primary (Euronext, Deutsche Börse, LSE):

Access dark and Integrated order book liquidity up to the order's limit price then route to the chosen market centre for any remaining shares up to the limit price. Any final remainders will rest on the Integrated order book or the dark order book.

DRT: Access dark and Integrated order book liquidity up to the order's limit price then route to select external dark order books for any remaining shares up to the limit price. Any final remainders can optionally rest on the Integrated or the dark order book.

Dark Order Books

The Dark order books are midpoint dark order books with time priority matching designed to minimise information leakage. They are separate dedicated order books offering the same securities, clearing, markets traded and core trading hours as the Integrated order books.

Midpoint Peg Orders

The dark order books only allow Midpoint orders, which peg to the midpoint of the Primary Best Bid and Offer (PBBO).*

Limit prices are allowed on orders in the Cboe dark order books as a risk management tool to specify a price floor or cap.

Time in Force (TIF) availability for orders are:

- DAY; GTD (Good 'til Day) If not executed, cancelled at expire time or 16:30 (London).
- IOC (Immediate or Cancel) Remainder of the order not filled immediately is cancelled. Minimum quantity is available with IOC orders.

Minimum Quantity (MinQty)

MinQty either allows multiple fills that in aggregate fulfil the MinQty or requires the MinQty is executed in a single fill. Once resting, MinQty orders are only executed in a single fill that satisfies the MinQty set. Partially-filled order residuals lower than the set MinQty will be reset to the residual order size.

* Hidden orders may rest on the Integrated order books. Any orders with a Time in Force of IOC are not classified as hidden orders. Where applicable, hidden orders must, at the time of entry, meet the MiFID large in scale (LIS) criteria or, for financial instruments not covered by MiFID LIS restrictions, the criteria published by Cboe. ** Primary Best Bid and Offer (PBBO) is the best bid and offer available on the relevant Primary Market.

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