CBOE EUROPE EQUITIES RECOGNISED INVESTMENT EXCHANGE PARTICIPANT MANUAL

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Contents

1. Introduction

This document (the "**Participant Manual**") explains the policies, procedures and technology used by Cboe Europe Limited, which trades under the name of Cboe Europe Equities ("Cboe"). This Participant Manual supplements the Cboe Rule Book. To the extent that there is any conflict or inconsistency between this Participant Manual and the Cboe Rule Book, the Cboe Rule Book shall apply and control to the extent of the conflict or inconsistency.

Information contained in this Participant Manual is subject to change at any time. For the latest updates, please refer to our website http://markets.cboe.com/europe/equities (the "**Website**").

Terms defined in the Cboe Rule Book shall have the same meaning in this Participant Manual (unless the context requires otherwise).

2. Our Mission

Our mission is "to make markets better" through innovations in technology, performance, pricing, market structure and customer service.

Cboe believes competition drives innovation and that Participants should have a choice between multiple competing electronic markets and post-trade service providers.

We are continuously working to enhance our product functionality.

3. How Cboe Works

Cboe is recognised and regulated by the Financial Conduct Authority ("FCA") as a Recognised Investment Exchange ("**RIE**").

Cboe operates a Regulated Market ("**Cboe RM**"), for the admission and trading of Exchange Traded Funds and other securities, and an MTF ("**Cboe MTF**") on which Participants can trade a range of pan-European financial instruments (each a "**Cboe Market**" and collectively the "**Cboe Markets**").

From time to time, Cboe may offer additional related services.

Transactions conducted on the Cboe RM and Cboe MTF are conducted under the Rules and may be centrally cleared by the Central Counterparty(ies).[1]

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[1] *Participants have the option to suppress the reporting of certain self matched transactions to the Central Counterparty(ies) where there is no net settlement. Please refer to the Clearing and Settlement section of the Participant Manual.*

Cboe Markets
The Cboe Markets are traded on the BXE and CXE Integrated Books and the BXE and CXE Dark Books. Participants may also bring Negotiated Transactions under the Rules.

Participants connect to the Cboe Markets via the Cboe FIX Order Handler using the industry standard FIX protocol, with Cboe specific extensions or via the Cboe Binary Order Entry ("BOE") protocol.

Integrated Books
The Integrated Book is an anonymous central limit order book, which combines both Displayed (or visible) and Non Displayed (or hidden) liquidity. In this book, the matching engine compares the limit price of an incoming Order with the price of resting limit Orders on the book. If the Order is immediately marketable against the book, an immediate match is made and communicated back to the Participants.

Resting Orders are matched according to the following criteria in descending order of priority:

   i.   Price – the displayed limit price of the Order;
   ii. Display – Displayed (visible) Orders have priority over Non Displayed (hidden) Orders and reserve Orders; and
   iii. Time – the time the Order was received by Cboe (time priority in the Cboe Integrated Book is based on the time stamped on an Order when it arrives in the book).

For priority of pegged Orders, please see Section 26 (Order and Trade Types).

Trading on the Cboe RM Integrated Book is opened and closed with an auction. The auction begins with a call period of fixed length, during which Participants can submit, amend and cancel orders, but no automatic execution takes place. The call period in the opening auction lasts 10 minutes and in the closing auction lasts 5 minutes. This is followed by a random additional call period of up to 30 seconds after which the auction will attempt to uncross. If the uncrossing would generate a price movement of 5% relative to the reference price, an additional price monitoring extension period of 30 seconds will be triggered. The reference price used will be the last order book traded price, or the open or close price; whichever is the most recent. If the uncrossing would leave unexecuted market orders an additional market order imbalance extension period of 30 seconds will be triggered. A random period of up to 30 seconds will be applied after each extension. A maximum of three price monitoring and three market order imbalance extension periods may be triggered in a single auction.

All unexecuted orders are deleted following an auction, with the exception of orders entered during the opening auction with a TimeinForce value of AtTheClose, which will rollover to the closing auction.

Periodic Auction Book
The Periodic Auction Book is a separate lit book that operates intra-day auctions throughout the trading day. It uses a standard auction price calculation with a price / size / time priority allocation of executions. The book is provided in the BXE environment.

The frequency of the auctions is based on observed activity levels in each security, with more liquid securities uncrossing more frequently. The maximum duration of the auction for each security is made available in the symbol reference file. The actual duration of the auction is random: uncrossing can take place at any time after the start of the auction, up to a maximum duration.

Orders that do not meet the minimum order entry size at the point of entry will be rejected. Any amendment to a resting order will be reassessed against the minimum order entry size and the order will be cancelled back if the amended size does not meet the minimum. The notional value of the minimum order entry size will be notified by Trade Desk Notice. The minimum order entry size, expressed as a number of shares based on the previous night's close, will be included in the daily symbol file.

Participants can set a Minimum Quantity (MinQty) for orders in the Periodic Auction Book. Where Participants have set a MinQty, the auction algorithm will only consider the order for execution if the MinQty can be satisfied. The algorithm will allow multiple fills that in aggregate fulfil the MinQty. Where an Order is partially filled and the residual Order size is lower than the MinQty, the MinQty will be reset to the residual Order size for subsequent auctions.

Participants can also set broker preferencing for orders in the Periodic Auction Book at port level. Where broker preferencing is set, orders with this attribute will be uncrossed in priority moving the execution from price / size / time to broker / price / size / time priority during execution allocation.

To ensure best price and orderly price formation with respect to other Cboe order books in continuous trading, an execution collar is applied that prevents uncrossing if the uncrossing price is outside the execution collar and, if a valid uncrossing price can be generated, will only consider orders that are marketable within the collar range. Please refer to the Periodic Auctions Book Guidance Note for further information on execution price protection. If uncrossing is prevented then any eligible orders will automatically roll into the next auction.

Indicative uncrossing price and volume are disseminated in real time during auction call periods. Cboe also disseminates whether or not the indicative uncrossing price is within the execution collar and therefore likely to uncross as well as a flag to indicate if the collar includes the primary market prices. If the indicative price is outside of the collar (meaning no uncrossing would occur) the indicative price and volume will be omitted from the message. If the indicative price returns to being within the collar then a new message will be published with the indicative price and volume prior to any uncrossing.

A full description of the functionality of the Periodic Auction Books is set out in the Guidance Note which is available on the Cboe website.

Dark Books
The Dark Book is an anonymous midpoint order book, which is separate from the Integrated Books, where all Orders are Non Displayed. The Dark Book uses the pre-trade transparency waiver available to reference price systems under the Market in Financial Instruments Directive ("**MiFID**")

and Regulation, Cboe Dark Books support the use of the waiver in shares, ETFs and DRs. Therefore, any Orders submitted to the Dark Book will not be pre-trade transparent. The reference price used is the midpoint of the relevant Best Bid and Offer on the Listing (Primary) Market (the "**PBBO**").[2]

Participants should note that where market data is unavailable from a particular Listing Market for whatever reason, Dark Books will not normally be supported in relation to those markets. Further information on affected markets will be made available on the Cboe website or via a Trade Desk Notice. Alternatively, Participants can contact the Cboe Trade Desk.

Cboe Closing Cross (3C)
The Cboe Closing Cross is a separate lit book that operates after the close of continuous trading, which will generally be at 16:30. The book is provided in the BXE environment. The book is non-continuous and uncrosses every 15 seconds for 25 minutes.
Only at-limit order types are permitted in 3C. At-limit orders can only trade at their limit price and offer no possibility of price improvement. Orders entered into 3C are pre-trade transparent and subject to a 20% static collar based on the last continuous book traded price on BXE, CXE or DXE using the transaction time from the matching engine to determine the most recent trade price to use..

The 3C uncrossing comprises two steps - price determination followed by execution allocation. To determine a single equilibrium match price the following criteria are assessed in sequence:
  i.   Maximum executable volume. If a single crossing price can be chosen, which uniquely maximises the crossing volume, then this is chosen as the crossing price.
  ii.   Closest to last traded price - If i. does not resolve a tie break the order which is priced closest to the last traded price will be selected
  iii.   Highest price – If i. and ii. do not resolve a tie break, the order with the highest price will be selected.

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Participants can set a Minimum Quantity (MinQty) for orders in 3C. Where Participants have set a MinQty, the auction algorithm will only consider the order for execution if the MinQty can be satisfied. The algorithm will allow multiple fills that in aggregate fulfil the MinQty. Where an Order is partially filled and the residual Order size is lower than the MinQty, the MinQty will be reset to the residual Order size for subsequent uncrosses.

Once the price has been determined, allocation of executions will be determined based on size then time. Brokers can optionally choose the broker priority attribute at port level. Orders with this attribute will be uncrossed in priority moving the execution from size / time to broker / size / time priority during execution allocation.

A full description of the functionality of Cboe Closing Cross is set out in the Guidance Note, which is available on the Cboe website.

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[2] *Where appropriate, midpoint prices are rounded (up) to four decimal places.*

Cboe BIDS Europe
Cboe BIDS Europe is an additional service which allows for the interaction of non-actionable Indications of Interest ("IOIs"), resulting in the execution of Large in Scale ("LIS") trades. The system allows non- actionable IOIs to match at or within the EBBO, with the ability to set additional price requirements such as Limit Price, Market Price and Pegged Price.

Cboe BIDS Europe will identify potential matches between non-actionable IOIs submitted to the system and send an invitation to firm up to each submitter.

An invitation to firm-up will be sent if the following conditions are met on a single non-actionable IOI:
- The prices match or cross
- The symbol is available for matching
- The IOI meets the minimum volume requirements of the contra and vice versa
- The match size is equal to or superior to the LIS value
- The Scorecard for the trader must meet or exceed the Filter setting for the contra and vice versa (for further details see the LIS Service Description)

The submitter has then the opportunity to firm up within a set time limit. The time limit will depend upon the type of user and the capacity in which they are acting and will be advised by Cboe from time to time.

Two firm-ups will automatically result in a negotiated trade under the following conditions:
- The symbol is available for execution
- The prices match or cross at or within the EBBO
- The volume on the firm-up meets or exceeds the minimum volume on the contra firm-up and vice versa
- The trade size is equal or superior to the LIS value symbol

The firm-up will then result in a Large In Scale Transaction on the Cboe Markets and benefiting from the LIS waiver.

In order to maximise the interaction of non-actionable IOIs, each user ID submitting non-actionable IOIs will be assessed via the Scorecard. This determines an overall score based on a trader's past behaviour. A trader who responds to invitations frequently, on the terms on their initial non-actionable IOI, will have a high score. By contrast, a trader who consistently ignores invitations to trade, or responds with an inferior terms, will have a low score.

Users can also set filters when submitting a non-actionable IOI, which allows them to manage the counterparties with whom they are willing to interact.

Participants interested in using the LIS Service should carefully read the LIS Service Description to fully understand the functionality and behaviour.

Cboe Liquidity Provider Program(s)
Cboe operates a Liquidity Provider Program for Participants that wish to provide liquidity on a Cboe Market in accordance with the criteria set out in Sections 9 and 10.

Cboe Closing Price
On any given Working Day, Cboe will publish a closing price for a Security admitted to a Cboe Market using the criteria below.

Cboe MTF – in any given Security, the price of the last transaction on that day. If there are no transactions on a given Working Day, the last Cboe Closing Price is used.

Cboe RM - in any given Security, the price of the last transaction on the Cboe RM on that day, provided that it is at or within the bid and offer at the close. If it is not, the mid-point of the best bid and offer on the Integrated Book. If there is no valid bid and offer on the Integrated Book then the price of the last transaction. If there are no transactions on a given Working Day, the last Cboe Closing Price is used.

Order Price Collar
All Orders submitted to the Cboe Markets are subject to an Order Price Collar based on a reference price. Where Cboe receives an Order priced outside of the Order Price Collar, the aggressive Order is rejected.

The Order Price Collar is 5% or more through the EBBO[1], with a minimum increment of more than 1 tick. Where the EBBO is unavailable or has a one-sided quote, the Order Price Collar is 5% or more through the price of the last transaction on the BXE and CXE order books, with a minimum increment of more than 1 tick.

Price checking will be as described above except during an auction phase on any market contributing to the EBBO. In this case the most recent price update will be used as the reference price. This will include both transactions and indicative auction value updates.
Where there is no EBBO and there has been no transaction on any market contributing to the EBBO on that day, there is no Order Price Collar.
Participants who wish to impose a narrower Order Price Collar at order entry may do so on an opt-in basis either at the Participant level or session level by contacting the Cboe Trade Desk (+44.207.012.8901, TradeDeskEurope@cboe.com). Narrower collars are only used at the point of Order entry with respect to aggressive Orders.

Static Price Collar
In order to help manage volatility events, a static price collar will be applied to the trading of Securities on the Cboe RM and for Cboe MTF markets where the Listing Market data is not contributing to the EBBO (as communicated via a Cboe Trade Desk Notice). Unless notified otherwise, the collar will initially be set at 10% away from the previous closing price. This will

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[1] *The Order Price Collar uses the best Displayed buy Order and the best Displayed sell Order of:*
- *Cboe UK lit venues (BXE, CXE) and Cboe NL lit venue (DXE)*
- *Turquoise UK and Turquoise EU (excluding the Czech Republic, Hungary and Poland)*
- *the Listing Market (excluding Spain, the Czech Republic, Hungary, Poland and Frankfurt Stock Exchange)*

prevent the acceptance of new aggressive orders that breach the static threshold, e.g. an aggressive buy order that would breach the threshold price would be cancelled, as would sell orders below the lower limit.

Once a collar is triggered, a two minute period will elapse before the collar will automatically move to the next threshold, unless Cboe determines that the collar was breached due to an erroneous trade, in which case Cboe will cancel the automatic move and bust the trade. The collar price thresholds will increase in increments of 10%.

Market Data
Full depth of book market data for Displayed Orders on the Cboe Integrated Books is available via the Cboe PITCH protocol.

All published executions on the Cboe Markets are also available on the market data feed.

Participants may also receive copies of their Orders via the Cboe FIX protocol and may receive copies of their executions via either the Cboe DROP or FIX protocol.

Note on trading securities listed on the Bolsas Y Mercados Españoles
Participants' use of pegging functionality when trading securities in the Spanish segment is subject to them confirming in writing to Cboe that they are in possession of a SIB N1+ market data licence from Bolsas Y Mercados Españoles. Participants are required to notify Cboe promptly in writing if the above market data licence is no longer in place.

4. Technology

The Cboe trading platform is housed in a world-class data centre in Equinix Slough (LD4).

The Equinix Slough (LD4) data centre provides a high level of security, redundant power supplies including an on-site backup generator, and reliable cooling. Data centre personnel are available 24/7 to maintain and service the system.

The Cboe trading platform is distributed across several Linux blade servers to maximise throughput and minimise bottlenecks. More blades can be added easily to expand system capacity.

Fast, reliable data storage is provided by a Storage Area Network ("**SAN**").

Please refer to the Cboe Europe Connectivity Manual which is located on the Cboe website for details of Cboe's compliance with Commission Delegated Regulation ("RTS 10").

5. Participation

Participation on the Cboe Markets
Participation on the Cboe Markets is open to any partnership, corporation or other organisation which meets the Eligibility Criteria set out in the Rules.

Applications for participation are made using the Cboe Participant Application Form, which is available on the Website.

Cboe may require additional information including:

i. in the case of an EEA investment firm or credit institution, information on its status and the scope of its permissions, if applicable;

    a. in the case of an Applicant which is not an EEA investment firm or credit institution, any such information as Cboe may require to determine whether the Applicant is fit and proper; has a sufficient level of trading ability and competence; has adequate organisational arrangements; and has sufficient resources for the role they are to perform;

ii. in the case of an Applicant which is not in the regulated sector and not subject to the EU anti money laundering directive (2005/60/EC), such information as Cboe may reasonably require to ensure that the Applicant has in place appropriate procedures to prevent money laundering and other financial crime;

iii. confirmation from the relevant Central Counterparty that appropriate arrangements are in place for the clearing and settlement of the Applicant's transactions.

Further information on providing clearing services for Participants can be obtained from the relevant Central Counterparty. Contact details for the Central Counterparties are available on the Website.

Use of the Cboe Liquidity Provider Program
Access to and use of the Cboe Liquidity Provider Program is available to Participants of the Cboe Markets. Access to and use of the Cboe Liquidity Provider Program is made available at Cboe's absolute discretion.

Any Participant who wishes to make use of the Cboe Liquidity Provider Program must enter into a Liquidity Provider Program Addendum which is available on the Website.

Use of the Cboe BIDS Europe Service
Access to and use of the Cboe BIDS Europe Service is available to participants of the Cboe Markets. Access to and use of the Cboe BIDS Europe Service is made available at Cboe's absolute discretion.

Any participant who wishes to make use of the Cboe BIDS Europe Service must enter into a Cboe BIDS Europe Service Participant Addendum.

Further Information
Further information on the Eligibility Criteria and application process is available from Cboe Participant Services: +44 20.7012.8927 or ParticipantServices@cboe.com.

Further information on technical specifications and systems requirements is available from the Cboe Trade Desk: +44.20.7012.8901 or TradeDeskEurope@cboe.com.

6. Sponsored Access

A Participant may, at any time, apply to Cboe to permit a third party (a "**Sponsored Client**") to access and use of a Cboe Market on behalf of and in the name of the Participant (the "**Sponsoring**

Participant"). Cboe will require the Sponsoring Participant to enter into a Sponsored Access Addendum, which is available on the Website.

Cboe may also require the Sponsoring Participant to have in place such systems and controls and/or to provide such information from or relating to any Sponsored Client as Cboe may in its absolute discretion consider appropriate whether before or after the Sponsored Client has been allowed access to and use of a Cboe Markets.

Cboe will deal with the Sponsoring Participant in relation to any Sponsored Client although Cboe may, if it deems it appropriate, contact the Sponsored Client directly, such as in the case of operational matters.

It is the responsibility of the Sponsoring Participant to ensure that each of its Sponsored Clients complies with the duties and obligations imposed on Participants by the Rules as if the Sponsored Client were the Participant (save for in respect of any such duties and/or obligations which manifestly relate to the Sponsoring Participant only). All Orders placed and transactions executed on the Cboe Markets by a Sponsored Client will be treated as the Orders and transactions of the Sponsoring Participant who will be wholly responsible for the acts and omissions of the Sponsored Clients they sponsor.

Cboe will expect Sponsoring Participants to utilise the Sponsored Access functionality provided by Cboe. This functionality includes the pre-execution control functionality, details of which can be found in the Cboe Web Risk Controls Specification on the Website, and the DROP COPY data feed functionality, details of which can be found in the Cboe DROP and FIX specifications on the Website. Sponsoring Participants shall monitor the activity of their Sponsored Clients. Where a Sponsoring Participant does not use any of the Cboe Sponsored Access functionality, Sponsoring Participants shall otherwise satisfy Cboe that they have appropriate controls in place.

Cboe may suspend, terminate or restrict a Sponsored Client's right of access to and use of the Cboe Markets. For the avoidance of doubt, this includes, but is not limited to, circumstances in which the Sponsoring Participant is no longer able to effectively monitor the activity of its Sponsored Clients or where Cboe considers it necessary to maintain the orderly functioning of its market. Cboe may, but shall not be obliged to, give notice to the Sponsoring Participant of its intention to take any action with respect to a Sponsored Client's right of access to and use of the Cboe Markets.

Any Participant proposing to add a Sponsored Client may wish to contact Cboe Participant Services to discuss their plans: +44 20.7012.8927 or ParticipantServices@cboe.com.

7. Continuing Obligations

Participants are responsible for ensuring that, at all times, their directors, officers, employees and agents having access to the Cboe Markets or other services have adequate experience, knowledge and competency to transact business on and through the Cboe Markets and provide them with adequate training.

Each Participant shall provide Cboe with details of the person or persons who are responsible for:

    i.   managing the relationship with Cboe;
   ii.   ensuring the Participant's compliance with the Rules;
  iii.   technical (operations) matters;
  iv.   legal documentation;
   v.   payment of accounts; and
  vi.   requesting changes to the Participant's trading profile e.g. a mass order delete, trade busts.

Notice of changes to such personnel may be made by email to Cboe Participant Services: +44 20.7012.8927 or ParticipantServices@cboe.com.

It is each Participant's responsibility to ensure that they have in place adequate systems and procedures to ensure their ongoing compliance with the Rules and the standards which might reasonably be expected of Participants.

8. Maximum Order to Trade Ratio Policy

All trading in the Integrated and Dark Books is subject to a Maximum Order to Trade Ratio (OTR) policy. Participants are required to adhere to two symbol level thresholds at the end of each trading session; one 'Number Denominated Ratio' and one 'Volume Denominated Ratio'.

The respective thresholds are displayed as a value populated in the daily symbol file and Participants' compliance with the thresholds is monitored by Cboe.

The daily symbol file values are populated dependent on the band in which the symbol has been placed by Cboe as per the table below. A symbol's band allocation is derived from an end of month calculation performed by Cboe.

Liquidity Band	Volume/Number Ratio	Floor	Threshold
Band A	Number Denominated Ratio	1	100,000
Band A	Volume Denominated Ratio	10,000	500,000
Band B	Number Denominated Ratio	1	250,000
Band B	Volume Denominated Ratio	10,000	1,250,000

When admitting a new symbol, the symbol will initially be placed in Band B.

Liquidity Provider Program
A Participant registered and successfully meeting its obligations under a Liquidity Provider Program in a given symbol is subject to a Liquidity Provider OTR threshold in the relevant symbol.

Volume/Number Ratio	Floor	Threshold
Liquidity Provider Number Denominated Ratio	1	1 000 000
Liquidity Provider Volume Denominated Ratio	10,000	10 000 000

Monitoring and breaches
When monitoring Participants' compliance with the OTR threshold, Cboe applies a Floor to the breach calculation, where the floor represents the number of units granted per day.

Cboe performs monitoring of Participant OTRs on a symbol by symbol basis over each daily trading session. Participants found to have been trading at a ratio above the threshold at the end of a trading session will be deemed to have been in breach of the OTR, which will result in a notification from Cboe.

A fixed penalty fine will be issued by Cboe if a Participant breaches the ratio four times or more during a calendar month without any mitigating circumstances (please see Cboe's Disciplinary Policy).

9. Liquidity Provider Program(s)

The Cboe Liquidity Provider Program(s) ("**Liquidity Provider Program**") has been designed for Participants that wish to provide liquidity on Cboe by posting and maintaining executable quotes with certain set parameters, as outlined below, with the result of providing liquidity on a regular and on-going basis to the market.

Cboe will temporarily release Participants from their obligation to provide liquidity on a regular and predictable basis in the case of Exceptional Circumstances. Furthermore, Cboe may in its absolute discretion suspend or withdraw the Liquidity Provider Program during Market Disruption.

In order to be considered a Liquidity Provider pursuant to the Liquidity Provider Program, a Liquidity Provider undertakes to quote in accordance with the requirements set out below.

Securities Subject to the Liquidity Provider Program
A Liquidity Provider may elect to add liquidity pursuant to the Liquidity Provider Program in one or more Securities on either or both of the Cboe Integrated Books (BXE and CXE). A list of Securities

offered on the Liquidity Provider Program is available on the Website. From time to time, Cboe may change the list of eligible Securities and will provide such information on the Website.

Required Size

Where a Program specifies a Required Size a Liquidity Provider must provide reasonable quotations by maintaining quotes, such that the aggregate displayed size of qualifying bids or offers in any relevant Security of at least the Required Size (as set out in the table below), or the equivalent, as determined by Cboe, in the traded currency of the relevant Security, in order for such quotations to qualify as quotations satisfying the requirements of the Liquidity Provider Program.

Specified Price

A Liquidity Provider must enter and maintain bid prices that are no more than the specified percentage below the Cboe Best Bid and an offer price that is no more than the specified percentage above the Cboe Best Offer (as set out in the table below), with respect to each relevant Security, in order for such bid or offer, respectively, to qualify as a quotation satisfying the requirements of the Liquidity Provider Program.

Required Time

The Liquidity Provider Program is active between the Official Market Open and Order Book Close (as those terms are defined in Section 31), provided, however, the program shall not be active on the Cboe MTF (i) during any trading day until after the first transaction on the Listing Market in the relevant Security, (ii) during an auction, a request by the issuer to suspend the relevant Security, a suspension from trading by Cboe, or where a Regulator has instructed such suspension (collectively, a "halt"), until after the first transaction on the Listing Market in the relevant Security following such halt, and (iii) in a relevant Security where there is a public holiday on the Listing Market in the relevant Security.

A Liquidity Provider must be present on the Integrated Book for the relevant Security(ies) consistent with the Required Size, the Specified Price and for the Required Time (as set out in the table below). Non Displayed Orders entered by the Liquidity Provider do not qualify towards a Liquidity Provider's obligations under the Liquidity Provider Program.

Liquidity Provision Flag

All orders submitted in accordance with Liquidity Provider Programs must be flagged as liquidity provision activity in accordance with Rule 11.9.

Liquidity Provider Program Parameters

Cboe has three Liquidity Provider Programs. Participants can choose to provide liquidity under any of these Programs. For the purpose of the Liquidity Provider Program, the Required Size, Specified Price, and Required Time shall be as follows:

	REQUIRED SIZE	SPECIFIED PRICE %	REQUIRED TIME %
Program 1	€5,000	0.25%	80%
Program 2	€5,000	As per LP commitment[3]	95%
Program 3[4]	N/A	2%	50%

For Program 1, presence on the Cboe Integrated Book is calculated as the sum of time, while the Liquidity Provider Program is active, that a Liquidity Provider has qualifying bids or offers divided by twice the time that the Liquidity Provider Program is active.

For Program 2, presence is calculated as the time that the Liquidity Provider Program is active and a Liquidity Provider has qualifying bids and offers displayed simultaneously on both sides of the order book.

For Program 3, presence is calculated as the time that the Liquidity Provider Program is active and a Liquidity Provider has at least two simultaneous two-way quotes of comparable size within the specified price. Whereas comparable size is defined as the both sides not diverging by more than 50% from each other, however when assessing comparable size, any marginal volume in excess of €1,000 is ignored.

Withdrawal from Liquidity Provider Program

Subject to meeting the Minimum Term requirement of 30 days, as set out in the Cboe Rules, a Liquidity Provider may voluntarily terminate its status as a Liquidity Provider in either Program 1 or Program 2 by providing Cboe with a written notice of such termination. Notifications should be made to Cboe Participant Services by e-mail or at Cboe's registered office.

A Liquidity Provider may temporarily withdraw its status as a Liquidity Provider in a Security or Securities for compliance reasons, or if it is experiencing technical or operational difficulties. In such circumstances, the Compliance Department of the Liquidity Provider must notify Participant Services by email at ParticipantServices@cboe.com of the temporary withdrawal and the reasons for it. Cboe may terminate a Liquidity Provider's participation in the Liquidity Provider Program if such Liquidity Provider demonstrates a frequent need to withdraw due to compliance, technical or operational problems.

N.B. It is a Participant's responsibility to ensure that it can continue to comply with Article 1 of Commission Delegated Regulation (EU) 2017/578 ("RTS 8") following withdrawal from any Liquidity Provider Program.

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[3] The Liquidity Provider must commit to a Specified Price that is sufficiently narrow to efficiently fulfil its role for the relevant Security.

[4] Program 3 complies with the minimum requirements for a market making agreement as set out in Article 2 of Commission Delegated Regulation (EU) 2017/578 and is therefore appropriate for Participants that are obliged to enter into a market making agreement under Article 1 of that Regulation.

Fees

Liquidity Providers do not receive or pay any additional fees for executions that occur through the Liquidity Provider Programs. Standard Cboe execution fees apply. Please refer to the Pricing Schedule located on the Website for further details.

10. PTM Levy (UK Transactions)

Where relevant, a Participant should ensure the collection of the PTM levy from its clients on transactions executed on the Cboe Markets or any other services. The PTM levy is charged at the rate(s) specified from time to time by the Panel on Takeovers and Mergers. Information on the current PTM levy is available on the Panel on Takeovers and Mergers' website: http://www.thetakeoverpanel.org.uk.

11. Tax (UK SDRT; Irish SDT; French FTT)

All purchases of UK shares on the Cboe Markets or any other services will be subject to UK Stamp Duty Reserve Tax ("**UK SDRT**") (as defined in the UK Finance Act 1986, as amended). However, some Participants may be able to claim intermediary relief from UK SDRT (as set out in section 88 of the UK Finance Act, as amended).

Any Participant which qualifies as an intermediary (as defined in the Finance Act as a "person who carries on a bona fide business of dealing in chargeable securities and does not carry on an excluded business") will be able to apply to the UK HM Revenue & Customs ("**HMRC**") for intermediary relief (either via Cboe or directly to HMRC). Any decision as to whether a Participant qualifies for intermediary relief rests with HMRC. In order for a Participant to be eligible for intermediary relief it must have a UK address for HMRC to inspect its records. In the event that the Participant does not have a UK address then the Participant may use the UK address of its General Clearing Member with their agreement.

If any Participant believes that it can claim intermediary relief and it wants to apply for intermediary relief via Cboe, then it is required to forward a completed self-certified UK SDRT Intermediary Relief Form to Cboe and Cboe will review the form and pass it on to HMRC for processing. The Form is available on the Website.

Where a Participant has opted to suppress the reporting of certain transactions on the Cboe Markets to the Central Counterparty(ies), where those transactions are in securities which are subject to UK SDRT, that Participant is required to have in place appropriate arrangements so that each and every qualifying transaction which is suppressed is appropriately notified to HMRC or Euroclear UK and Ireland.

All purchases of Irish shares on the Cboe Markets will be subject to Irish Stamp Duty Tax ("**Irish SDT**") (as defined by the Stamp Duties Consolidation Act 1999, as amended). However, some Participants may be able to claim intermediary relief from Irish SDT (as set out in section 75 of the Stamp Duties Consolidation Act 1999, as amended).

If any Participant believes that it can claim intermediary relief, it should read the Irish SDT Guidance Notes and complete the self-certified Irish SDT Intermediary Relief Form. The Guidance Notes and Irish SDT Intermediary Relief Form are available on the Website.

In relation to any financial transaction tax (FTT), Participants whose transactions fall within the scope of a FTT must account for the tax as required, for example through their CSD or through their settlement agent/custodian. For the avoidance of doubt, Cboe will not collect or be liable for any tax that might arise as a result of any transaction executed by Participants through its facilities.

Notifications
All notifications by Participants to Cboe (required by the Rules) should be made no later than the timing specified but ideally should be made in advance of an event triggering a notification and in the case of significant changes to the status or nature of a Participant (such as a change of ownership or control) at least five Working Days prior to the effective date of change.

Notifications should be made to Cboe Participant Services at Cboe's registered office by mail.

12. Trade Confirmations

Cboe will confirm Orders executed through the Cboe Markets via the Participant's order entry connection. The price, quantity and the nature of the transaction (buy or sell) will be made immediately available after an Order has been executed. Any discrepancy between the Order and confirmation should be immediately reported to Cboe Trade Desk (+44 207.012.8901). After a Participant has notified Cboe by telephone, a written notification must be made by the Participant to Cboe within thirty (30) minutes of the Order in question by email to TradeDeskEurope@cboe.com. The notification should include the name of the Participant, time(s) of the transaction(s), the symbol(s), the quantity(ies), the side (bought or sold) and the price(s).

Any erroneous transactions will be subject to the Erroneous Transaction Policy.

13. Substantial Shareholdings

Each Participant shall ensure that, where necessary, any transactions executed on a Cboe Market or any other services are incorporated into its calculations with regard to any applicable substantial shareholdings rules established by the FCA or any other relevant regulatory authority.

Where there are relevant requirements under substantial shareholdings rules to notify or seek approval from any person or body as to the existence of a substantial shareholding, Participants must ensure compliance with such requirements. Notification to Cboe will not discharge any obligations under any substantial shareholding rules.

14. Rules of Fair Practice

Each Participant shall supervise persons associated with it to ensure its compliance with the Rules and the FCA Rules, the rules and guidance of any other relevant regulatory authority, the EU Market Abuse Directive (2003/6/EC) and any other applicable regulations or laws.

15. Suspension, Termination and Restriction

Notice of suspension, termination or the restriction of a Participant's right to place Orders or receive information from a Cboe Market or any other services shall be made by telephone or email and confirmed by letter or fax. Cboe is under no obligation to notify a Participant before suspending the Participant or restricting the Participant's right to place Orders or receive information from a Cboe Market or any other services.

16. Information

In accordance with Rule 10, each Participant shall maintain for a period of 5 years in a legible format and (unless prevented by law from doing so) make available to Cboe on demand all and any information in the possession or under the custody and control of the Participant (or any Sponsored Client sponsored by that Participant) relating to its activity on a Cboe Market or any other services, any Order (including but not limited to information about the reception and transmission of any Order or its subsequent deletion or execution) and the settlement of any resultant transaction.

17. Erroneous Transaction Policy

In accordance with Rule 11.10, where a Participant reasonably believes that a transaction was executed on a Cboe Market or any other services as a result of an erroneously submitted Order, that Participant should in the first instance immediately telephone Cboe Market Supervision (+44 20.7012.8927) to request that Cboe review the transaction. Once a request is submitted, it may not be withdrawn without the consent of the counterparty(ies) to the transaction. After a Participant has notified Cboe by telephone, confirmation of this request must be made by the Participant to Cboe within thirty (30) minutes of the execution of the Order in question and no later than 18:00 on the day of the transaction, preferably using the Clearly Erroneous Execution (CEE) Form available through the Participant's web login or by email to TradeReviewEurope@cboe.com. Any request received after 17:45 will be dealt with on a best efforts basis, however this is likely to require action by the relevant CCP(s) rather than by Cboe.

The e-mail request need to contain the following details:

Participant	
Exchange Execution ID(s)	
Why the transaction is considered erroneous	

In accordance with Rule 11.11 of the Rule Book, Cboe may in its sole discretion review any transaction which it reasonably believes was executed as a result of an erroneously submitted Order irrespective of whether any parties to the transaction have requested Cboe to review the transaction.

As soon as practicable, Cboe will notify all parties to any transaction being reviewed under Rule 11.10 or 11.11 of the Rule Book. The parties to the transaction shall provide any supporting information as may reasonably be requested by Cboe to aid the resolution of the matter in such format and within such time as Cboe may reasonably specify in its request. Cboe will not disclose the name of the counterparty to the trade unless each of them waives their right to anonymity.

Participants must provide Cboe as soon as reasonably practical with any information requested by Cboe about a potentially erroneous transaction (in accordance with Rules 11.9 and 11.10 of the Rule Book) so that the matter can be resolved during the same trading day before the end of the day cut-off imposed by the relevant Central Counterparty(ies) for processing transactions.

When reviewing a transaction in accordance with Rule 11.9 or 11.10 of the Rule Book to determine whether a transaction is clearly erroneous, Cboe will consider the importance of preserving the integrity of the Cboe Markets, including the importance of preserving certainty of transactions executed on the Cboe Markets. Cboe will review every case on its own merits and may consider, without limit, any of the following criteria:

i. the price at which the Order was executed, including, where relevant, whether the price at which the Order was executed was more than 5% away from a suitable reference price. For the Cboe Markets, this will typically be the price of the last transaction on the Listing Market or any other relevant MTF. Cboe will in its sole discretion determine the reference price;
ii. information gained from the relevant Participants;
iii. Cboe's analysis of relevant market data;
iv. Cboe's analysis of relevant market events;
v. any system errors and/or failures that impact market integrity;
vi. any Negotiated Transactions which do not comply with the pricing criteria defined in the Cboe Rule Book; and
vii. any Negotiated Transactions which have been notified to Cboe using a Matching Exchange Trade Report and for which no Matching Confirmation has been received.

As soon as practicable, Cboe will notify all parties to any transaction being reviewed under Rule 11.9 or 11.10 of the Rule Book whether the transaction(s) will stand or be cancelled by email.

Where a Participant becomes aware that details of a Negotiated Transaction that has been notified to Cboe using an Exchange Trade Report are incorrect, it should immediately request that Cboe cancel or amend the Exchange Trade Report. Where the Participant is both the buyer and seller (single-party) or the Trusted Counterparty (multi-party) of the Negotiated Transaction, this request may be made electronically. Electronic cancellation and amendment requests are possible up to 18:00 on the sixth calendar day after the transaction for non-CCP cleared trades, and up to 18:00 on the day of the trade for CCP cleared trades. A maximum of three electronic amendments are possible for any particular trade. The availability of this functionality does not

remove the obligation on Participants to ensure that Exchange Trade Reports are accurate and that Cboe is made aware of any errors as soon as they are detected.

Where a Participant wishes to cancel more than 100 Negotiated Transactions, and is unable to do so electronically, Cboe will view this a prima facie breach of Rule 2.2.4 which required Participants to have adequate systems, procedures and controls. This will result in a fixed penalty fine (please see Cboe's Disciplinary Policy.)

If Cboe concludes that an Exchange Trade Report has been accepted in error by Cboe as a result of a Cboe system malfunction then that transaction will be considered to be erroneous and Cboe will cancel the transaction if it receives a request from either counterparty.

18. Default

In case of a default by a Participant all transactions executed on the Cboe Markets will be dealt with according to Rule 19 of the Rule Book.

19. Complaints

In the event that a Participant has any complaint against or is not satisfied with the service provided by Cboe or any other services, the Participant should inform Cboe's Compliance Department. Complaints should be sent to ComplianceEurope@cboe.com or 5th Floor, 11 Monument Street, London, EC3R 8AF.

All complaints will be considered by Cboe who will determine what action to take in response to the complaint.

Where Cboe and a Participant cannot agree on the resolution of a complaint, the Participant may request that the complaint is referred to the Independent Complaints Commissioner.

20. Currencies Quoted

Local currency for each Security: GBX, USD, EUR, JPY, CAD, AUD, NOK, DKK, SEK, CHF, CHF, CZK, HUF, PLN, NZD, MXN.

21. Eligible Securities

Cboe offers trading in financial instruments, including constituents of major European indices, Depository Receipts (DRs), Exchange Traded Funds (ETFs), Exchange Traded Commodities (ETCs) and Exchange Traded Notes (ETNs). Cboe will notify Participants of details of eligible Securities from time to time and will display a list of eligible Securities on the Website.

Participants will be permitted to trade in all Securities for which they have valid clearing arrangements, as confirmed by the relevant Central Counterparty. Participants should ensure that they only enter Orders into a Cboe Market, or any other services for those securities where

they have the appropriate regulatory permissions. A Participant may contact Cboe Participant Services at any time to amend its access rights.

With respect to the Cboe MTF, Participants may request that a Security be admitted to trading by contacting Cboe Participant Services and providing details of the Security. Cboe will determine whether or not the Security will be admitted to trading and the results of that determination will be communicated to the Participant. Requests for addition should be made prior to 10:00AM on the Working Day prior to the desired first day of trading. With respect to the Cboe RM, Securities may be admitted to trading subject to meeting the requirements of the Issuer Rules, and having an application for admission approved. Cboe reserves the right to add to and delete Securities from a Cboe Market or any other services, if Cboe deems it necessary or desirable to do so.

Any additions and deletions of Securities traded on the Cboe Markets or any other services will be communicated to Participants and will be displayed on the Website.

Cboe will not offer trading on the Cboe MTF in any securities which are not listed or admitted to trading on at least one of the principal European Exchanges. However, this may include admitting newly listed securities to the Cboe MTF on the first day of trading.

22. Minimum and Maximum Order Sizes

Minimum Order Size:	1 Share for all markets.
Maximum Order Size:	99,999,999 Shares for all markets.

23. Clearing and Settlement

Interoperable Central Counterparty Model
All Participants must have an appropriate clearing relationship with a Central Counterparty either directly or through a General Clearing Member. A list of eligible Central Counterparties is on the Website.

Under the interoperable Central Counterparty model, where a transaction occurs between two Participants, each leg of the transaction will be sent to the Participant's respective interoperable Central Counterparty for clearing and settlement processing.

Clearing Suppression Service
Participants have the option to suppress the reporting of transactions conducted on the Cboe Markets to the Central Counterparty(ies) where there is no net settlement; that is, where the Participant, clearing method (as a Direct Clearing Member or through a General Clearing Member) and the account type (either House or Client) are all the same. These transactions will not be sent to or cleared by the Central Counterparty(ies). Participants who wish to suppress the reporting of qualifying transactions to the Central Counterparty(ies) may do so on an opt-in basis for specified Listing Markets by contacting the Cboe Europe Trade Desk (+44.207.-012.8901, TradeDeskEurope@cboe.com).

Settlement Location

Unless agreed otherwise, a transaction in any European Security shall be settled in accordance with the standards set by the local Central Securities Depositary (CSD) for that Security, as published by Cboe and its CCPs from time to time. The normal settlement location and cycle for a market segment supported by Cboe is listed below:

MARKET SEGMENT	SETTLEMENT LOCATION	SETTLEMENT TIMELINE
Austria	OEKB	T+2
Belgium	Euroclear Belgium	T+2
Czech Republic	Centralni Depozitar Cennych Papiru, A.S.	T+2
Denmark	VP Security Services	T+2
Finland	Euroclear Finland	T+2
France	Euroclear France	T+2
Germany	Clearstream Frankfurt, Clearstream International	T+2
Hungary	KELER LTD.	T+2
International Depositary Receipts (IDRs)	Euroclear Bank	T+2
Ireland	Euroclear Bank	T+2
Italy	Monti Titoli	T+2
Netherlands	Euroclear Netherlands	T+2
Norway	VPS	T+2
Poland	KDPW S.A	T+2
Portugal	Interbolsa	T+2
Spain	Iberclear	T+2
Sweden	Euroclear Sweden	T+2
Switzerland	Sega Inter Settle	T+2
UK	Euroclear UK	T+2
Cboe RM	As advised by the security issuer	T+2

Settlement practices

In exceptional circumstances, Cboe or the relevant Central Counterparty may:

i. Change the settlement location of a Security, if it believes that settlement liquidity in a particular Security has shifted from one CSD to another

ii. Extend the settlement date of a Security for an off order book transaction.

The above courses of action will be taken in conjunction with the Central Counterparties supporting the Cboe market.

Dual ISINs

Please note that due to Cboe trading in multiple European market segments, Participants may trade and settle Securities with the same ISIN in multiple locations. The settlement location for each unique ISIN / currency / market segment combination is defined by the above table.

An example is shown below:

STOCK NAME	ISIN	CURRENCY	MARKET SEGMENT	SETTLEMENT LOCATION
STMicro Electronics	NL0000226223	EUR	France	Euroclear France
STMicro Electronics	NL0000226223	EUR	Italy	Monti Titoli

Non-standard settlement functionality is provided for the Exchange Trade Report (ETR) service where a non-standard settlement currency or location can be used in the following ways:

1. **Non-standard settlement currency**

Participants submitting ETRs to Cboe can indicate settlement in an alternative currency to the standard traded/settlement currency. This is available in the following markets and currencies:

Market	*Standard settlement currency	Alternative / Non-standard Settlement currencies **	Central Securities Depositary
UK	GBp, GBP	EUR, USD	Euroclear UK & I
Switzerland	CHF	EUR	SIS
Denmark	DKK	EUR	VP Securities

*The standard trading and settlement currency for the local market

Use of the above functionality is subject to submitting Participants passing a **mandatory conformance test in the Cboe Certification (UAT) environment.

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2. Non-standard settlement location

Participants submitting ETRs to Cboe can request settlement take place in an International CSD (ICSD), with settlement in Euros or US Dollars. This is available as follows providing Participants have the appropriate clearing authority in place from their General Clearing Member/Central Counterparty (CCP):

Market	*Standard settlement currency	Alternative / Non-standard Settlement currencies **	International Central Securities Depositary
All Markets	Local currency	EUR, USD	Euroclear Bank

*The standard trading and settlement currency for the local market

Use of the above functionality is subject to submitting Participants passing a **mandatory conformance test in the Cboe Certification (UAT) environment.

24. Time in Force Values

Orders may specify one of the following time in force values (each a "**Time in Force Value**"): IOC – immediate-or-cancel

DAY – available for trading during trading hours

GFA – expires at the end of the periodic auction before the next auction match attempt

GTD – expires at the earlier of the specified expiry time or at the end of the trading day.

The following additional Time in Force Values are available on the Cboe RM:

AtTheOpen – available for trading during the opening auction

AtTheClose – available for trading during the closing auction

All remaining Orders (including GTC Orders) shall expire at the end of the Cboe trading day.

25. Minimum Tick Increment

Cboe minimum tick size increments are available on the Website.

26. Order and Trade Types

Cboe Markets

Limit Orders
Cboe accepts limit Orders in the Integrated and Periodic Auction Books.

At-Limit Orders
Cboe accepts at-limit Orders in Cboe Closing Cross. At-limit orders will only execute at their limit price.

Market Orders
Cboe accepts market Orders in the Integrated and Periodic Auction Books. Cboe imposes a limit price on all market Orders. The limit price provided by Cboe on any market Order is 1% away from the EBBO but at least 0.1 traded currency units. Where the provided limit price would exceed the Order Price Collar, the limit price will be one tick inside the Order Price Collar. All market Orders are implicitly IOC.

Non Displayed (Hidden) Orders
Cboe allows Non Displayed Orders. Orders with a Time in Force Value of IOC are not classified as Non Displayed Orders.

All Non Displayed Orders in the Integrated Books must, where applicable, satisfy at the time of entry the qualifying Large in Scale (LIS) criteria specified in table 2 to Annex II of the Markets in Financial Instruments Directive (MiFID) Regulation. For financial instruments not covered by the MiFID LIS criteria, all Non Displayed Orders must satisfy at the time of entry the criteria determined by Cboe, which shall be displayed on the Website.

In the Integrated Books, Displayed Orders receive the highest time priority over all other Order types. Non Displayed Orders receive the lowest time priority.

Non Displayed Orders in the Dark Books must be flagged as midpoint but do not have to satisfy the MiFID LIS criteria. Participants may attach an absolute limit to their Orders, such that where the reference price (that is, the midpoint of the PBBO) is more aggressive than the specified limit, the Order will not be available for execution.

Executions in the Dark Books will only occur at the midpoint of the PBBO.

Participants can set a Minimum Quantity (MinQty) for the above Non Displayed Orders. Participants can configure this behaviour to, upon entry, either allow multiple fills that in aggregate fulfil the MinQty or require that the MinQty is executed in a single fill. Once resting, orders with a MinQty can only be executed in a single fill that satisfies the MinQty set. Where an

Order is partially filled and the residual Order size is lower than the MinQty, the MinQty will be reset to the residual Order size.

Reserve (Iceberg) Orders
All Iceberg orders are subject to a minimum order size of €10,000 or equivalent in the traded currency of the symbol.

In the Integrated Books, reserve quantities of an Order are filled only after Displayed and Non Displayed Orders are filled. Each subsequently "reloaded" Order is treated as a new lit tip with a priority associated with the time it was reloaded into the order book. With this Order type, a Participant can set the amount of the Order to be displayed and the amount of the Order to keep in reserve and how many shares are to be "reloaded" after the displayed portion is filled with each execution.

Iceberg orders are available in the Periodic Auction Books although they will be treated as limit orders with their total volume and no reserve.

Pegged Orders
In the Integrated Books on the Cboe MTF, Cboe allows Orders to peg to the PBBO in four ways:

i.   Primary – pegs to the same side of the PBBO as the Order
ii.   Market – pegs to the opposite side of the PBBO from the Order
iii. Midpoint – pegs to the midpoint of the PBBO (non-displayed)
iv.   Alternate Midpoint – pegs to the less aggressive of the midpoint of the PBBO or 1 tick inside the same side of the PBBO as the Order

Primary and Market pegs may include a non-aggressive offset. Midpoint pegs may not include an offset. Midpoint peg Orders have a lower priority than other peg Orders ranked at the same price.

In the Integrated Books on the Cboe RM, Cboe allows orders to peg to the Cboe Best Bid and Offer ("CBBO") in two ways:

i.   Market – pegs to the opposite side of the CBBO from the Order
ii.   Midpoint – pegs to the midpoint of the CBBO (non-displayed)

All visible pegged Orders (Primary and Market) in the integrated book are subject to the Cboe tick-sizes. If the implied referenced price is not on a Cboe tick, the visible peg Order limit price will be rounded in a non-aggressive manner away from the midpoint to the nearest Cboe tick increment.

Participants should note that where market data is unavailable from a particular Listing Market for whatever reason, pegged orders will not normally be supported in relation to those markets. Further information on affected markets will be made available on the Cboe website or via a Trade Desk Notice. Alternatively, Participants can contact the Cboe Trade Desk.

In the Periodic Auction Book Cboe allows orders to peg to the mid-point EBBO. Participants can request on the order that in the event that the Listing Market prices are not available that the order is not available for execution.

Post Only Orders
Cboe only allows post only Orders in the Integrated Books. Post only Orders allow Participants to make a market and specify not to remove liquidity. Any incoming displayed post only Order that would cross with a resting passive Order will be rejected. Any Non Displayed post only Order that would cross with a resting passive Order will not be rejected but will not be available for execution until a re-evaluation event has occurred, such as a new incoming Order or a price movement in the applicable reference price.

Sweep Orders

i. *Integrated Book*
Allows Participants to access both the BXE and CXE Integrated Books. The Participants book of entry will be associated to the order entry port (e.g. BXE Integrated Book via the BXE port) before any remaining quantity is sent to the other book (e.g. CXE Integrated Book). Non-IOC residual order quantity will be posted to the book of entry (e.g. BXE Integrated Book).

Best Price Sweep Orders will work through price levels from the combined order books, to the limit price.

Sequential Lit Sweep Orders will execute to the limit order price on the book of entry before any remaining quantity is sent to the other book. Please note that using the Sequential Sweep Order could result in Participants trading at prices that are worse than those available on the other book

Where Cboe only provides one Integrated Book for a security, Sweep Orders will be accepted but will behave according to the time in force value given.

ii. *Dark Book*
Allows Participants to access both the BXE and CXE Dark Books. The Participants book of entry will be associated to the order entry port (e.g. BXE Dark Book via the BXE port). Any remaining quantity will then be sent to the other book (e.g. CXE Dark Book). Non-IOC residual order quantity will be posted to the book of entry.

Where Cboe only provides one Dark Book for a security, Sweep Orders will be accepted but will behave according to the time in force value given.

iii. *Dark-Lit*
Allows Participants to access both the Dark and Integrated Books of either BXE or CXE using a single order. The order will execute first against available liquidity in the Dark Book and any remaining quantity will be sent to the Integrated Book. For non-IOC orders, any residual quantity will be posted to the Integrated Book.

iv. *Dark to Periodic Auction Book sweep order*

Allows Participants to access both the Dark and Periodic Auction Book using a single order. A qualifying order will sweep the Dark Book before resting in the Periodic Auction Book for the remaining quantity and time in force. The order will be midpoint pegged honouring the limit price. If a symbol is capped due to the MiFID double volume cap or primary market pricing is unavailable the order will route directly to the Periodic Auction Book. Broker preferencing will be honoured in the Periodic Auction Book but not in the Dark Book. Amendments to an order which is resting on the Periodic Auction Book will not route through the Dark Book.

v. *Dark on Expiry*

Allows Participants to access the Periodic Auction Book and then sweep the Dark Book using a single order. A qualifying order will have the option for any residual quantity to be swept from the Periodic Auction Book to the local Dark Book at the expiry of the auction as an Immediate or Cancel order. This functionality is only applicable to marketable Add or Cancel and Good for Auction order types, and Dark on Expiry can be specified on a per order basis or on the port level. If an order is supplied with a Minimum Acceptable Quantity ("MAQ") this value will be honoured in the Dark Book, and if the order has partially executed and the residual is below the MAQ then the MAQ will be set to the residual amount in the Dark Book.

vi. *All or nothing*

Allows Participants to set the MAQ on their Periodic Auction order to the full quantity of the order by setting a per order attribute or requesting a port default. An order with this type of functionality flagged will only execute if the full order size can be traded. This functionality is only available to marketable Accept or Cancel and Good for Auction order types.

Any order size amendments to orders flagged with All or Nothing shall be honoured. This instruction can be specified on a per order basis on inbound FIX/BOE messages using additional characters in the routing instruction or on the port level.

vii. *PAB Lit Sweep Order*

Allows Participants to use a single Accept-Or-Cancel (AOC) order to check the Periodic Auction Book ("PAB") for marketable contra liquidity (meeting any specified Minimum Acceptable Quantity and/or Price Improvement) in which case the order is accepted into the PAB as a Good For Auction order. If the order is not marketable in the PAB, it will immediately target the local Lit book using the original Time In Force ("TIF") of the order. Dark on Expiry can also be submitted as an additional sweep order attribute, which will route any unexecuted PAB order quantity to the local Dark book as an Immediate or Cancel ("IOC") order following the completion of the PAB cycle.

viii. *Dark PAB Lit Sweep*

Will first sweep the Dark book as an effective IOC before targeting the PAB book as an AOC order. If it is not accepted into the PAB, it will immediately target the local Lit order book with the client-specified TIF. DoE can also be requested as an additional sweep order attribute.

Please refer to the Periodic Auctions Book Guidance Note for further information

Accept Or Cancel (AOC) Orders

Cboe allows AOC orders in the Periodic Auctions Book. The AOC order type ensures marketable orders remain in the Periodic Auctions Book for the duration of the auction and are treated as Good For Auction (GFA) unless cancelled by the Participant. Non-marketable orders are cancelled back immediately. It should be noted that AOC orders accepted into the Periodic Auctions Book are likely to result in an execution but are not guaranteed to. Please refer to the Periodic Auctions Book Guidance Note for further information.

Near Side Peg

This order attribute allows Participants to peg to the bid or offer within the Periodic Auction Book with less message-traffic. In addition, It allows Participants to optionally select a price offset from the current near side of the EBBO. The peg's offset is limited to the more passive of the limit price on the order (if one is provided) and the mid-point.

Exchange Trade Reports ("ETRs")

The ETR trade type allows Participants to transact off-order book Negotiated Transactions and Large In Scale Transactions ("Off-book Transactions) on the Cboe Markets. Off-book Transactions are subject to the Rules, including meeting section 12 or 13 of the rules as appropriate. Upon receipt of an ETR, the Off-book Transaction will be acknowledged to the Participant and reported to the CCP(s) where appropriate. Participants should note, due to restrictions at some CCPs, Participants wishing to enter trades above €50 million should first contact Cboe Participant Services as trades above this value may be subject to rejection by those CCPs.

Off-book Transactions will be published in real time unless the Participant has requested trade reporting suppression or a delay for which the report is eligible. Participants must include transaction time in the ETR unless the transaction was conducted electronically and reported in real time, when Cboe will populate the transaction time as being the time of receipt.

i. Rule 12.1.4 (c) permits the submission of Negotiated Transactions where they are subject to conditions other than current market price, provided that they are identified as such in the ETR using the "PRIC", "NPFT" and "BENC" flags. Examples of the types of transactions for which this would be appropriate are set out in paragraphs (a), (b), (c), (e) or (j) of Article 6 of Commission Delegated Regulation (EU) 2017/587 ("RTS 1"). The flags should be set in accordance with Table 4 of Annex 1 of RTS1.

Responsibility for submission of ETRs

Participants must ensure that duplicate ETRs are not submitted. Rule 12.3 requires that the selling Participant submits the ETR, unless the Participants are using Matching Exchange Trade Reports (see below) or have agreed otherwise. Accordingly, in the event that two ETRs are received for the same trade, the buying Participant will be considered to be in breach of the rule unless it can demonstrate that agreement was reached for them to report.

Trusted Counterparties

Before Participants are able to submit ETRs for Off-book Transactions with other Participants, or in the case of Arrangers, on behalf of other Participants, they must be approved by the other Participant(s) to do so. A Participant should pre-approve any Participants that it is prepared to accept ETRs from using the Cboe Europe Exchange Trade Report Counterparty Trust Matrix form. Cboe will maintain a record of all "trusted" relationships and will only accept ETR submissions, amends and cancels between Participants where the appropriate trusted relationship exists between the submitting Participant and its counterparty or between the Arranger and both counterparties to the submitted trade.

Submission Via Third Party Matching Service

Participants may also elect to submit ETRs via a third party matching service. In this case, both Participants must have enabled the third party matching service provider as a reporting channel. A list of service providers that have the connectivity and have passed the appropriate conformance tests to be able to offer this service will be provided by Cboe on request.

Matching Exchange Trade Report ("METR")

Participants can also report NTs to Cboe using METRs. When using this method, the selling Participant must submit a METR to Cboe and the buying Participant must submit a Matching Confirmation. The METR and Matching Confirmation contain primary and optional secondary matching fields. While both Participants have an obligation to submit either an METR or Matching Confirmation, the selling Participant will be responsible for providing certain details, such as the trade time. Participants are not required to enter into trust relationships to enter into Off-book Transactions using METRs.

Where the price of a METR and Matching Confirmation do not match completely but the tolerance selected by the buying Participant allows for the price submitted by the selling Participant, then it is the price provided by the selling Participant that will be applied to the transaction.

Delayed Publication

Rule 12.6 permits Participants to request that the publication of a Negotiated Transaction that has been reported using an Exchange Trade Report be delayed in certain circumstances. Where a delay is requested, and if a transaction meets the size requirement, Cboe will apply the delay as set out in Tables 4, 5 and 6 of Commission Delegated Regulation (EU) 2017/587 ("RTS 1") Where an instrument is traded in a currency other than Euro, Cboe will convert the values in the table below using the appropriate exchange rate as published by ESMA. Where ESMA does not publish an exchange rate, Cboe will use a suitable alternative.

Settlement Price and Non-Standard Settlement

Participants can use additional fields on the ETR message to request that the CCP or CCPs settle Off-book Transactions at a price other than the transaction price. Participants can also request that the CCP or CCPs vary the settlement date. Valid settlement dates range from T+1 to T+30. Please note that any values populated in these fields do not alter the terms of the transaction on Cboe and will have no effect on transactions where clearing has been suppressed. This functionality is not currently supported for Off-book transactions that are reported using METRs.

27. Order Management

No guarantee is made about system performance, especially during periods of high volatility and Order traffic. However, the Cboe system was designed to handle at least 5,000 incoming messages per second, per port, while providing acceptable Order acknowledgement times. Participants planning to send Orders at a higher rate than 5,000 Orders per second should make arrangements to connect to multiple ports. Any incoming Orders in excess of 5,000 messages per second per port will be rejected.

Double Volume Cap Mechanism

Trading under the Reference Price and Negotiated Trade Waivers is limited based on the percentage of trading carried out under the waivers. The limits are set to 4% of the total volume of trading in an instrument on a given trading venue - or 8% of the total European Union volume of trading in an

instrument - over the previous twelve (12) months, calculated on a rolling basis in accordance with Article 5 of MiFIR.

The limits do not apply to Negotiated Transactions which are in a share, depositary receipt, ETF, certificate or other similar financial instrument;
- for which there is not a Liquid Market; or
- that are subject to conditions other than the current market price; or
- which are Large in Scale.

Cboe will make reasonable efforts to avoid breaching the 4% venue threshold and may choose to suspend use of the relevant waivers in a symbol pre-emptively in order to avoid a breach, which would otherwise result in a six (6) month suspension of use of the waivers.

Availability of the waivers for any given symbol is displayed in the Cboe symbol file.

28. Technical Requirements

The technology and infrastructure requirements which are necessary to connect to and operate on the Cboe Markets, including connectivity requirements, FIX specification, BOE specification and market data specifications are published and regularly updated on the Website.

Cboe publishes all connectivity options in the **Cboe Connectivity Manual**. Participants are responsible for choosing their telecommunications provider and arranging connectivity and for complying with the requirements as specified by Cboe from time to time.

29. Trading Hours (London Time)

Cboe Market

07:00 testing	Market data feeds and order entry handlers are available for connectivity
07:00	Cboe Trade Desk Staffed, NOC Desk Staffed, Participant Services Staffed, Development Support Available
07:50	Pre Market Open (ETRs can be submitted and opening auction will begin on Cboe RM)
08:00	Official Market Open (This may be delayed up to 08:06:30 on the Cboe RM if the opening auction triggers extension periods)
16:30*	Official Market Closed (Our book for the trading day is closed and all outstanding day Orders are cancelled although submission of ETRs can continue. The closing auction will begin on the Cboe RM. Cboe Closing Cross Open.)

16:35	Cboe RM closing auction uncrossing (This may be extended up to a maximum of 16:41:30 if all extension periods were to be triggered)
16:55*	Cboe Closing Cross Closed
18:00	After Market Closed (ETRs can no longer be submitted)
18:15	All inbound connections are severed
18:30	Cboe Trade Desk Closed
18:30	NOC Desk Closed

*Cboe Markets will generally observe the same trading hours as other Listing Markets. The Continuous Trading session and Cboe Closing Cross (3C) differ for the below market segments (all UK times):

Market Segment	Continuous Session End/3C Session Start	3C Session End
Oslo, Norway	15:20	15:45
Copenhagen, Denmark	15:55	16:20
Helsinki, Finland	16:25	16:50
Stockholm, Sweden	16:25	16:50
Dublin, Ireland	16:28	16:53
Prague, Czech Republic	15:10	15:35
Warsaw, Poland	15:50	16:15
Budapest, Hungary	16:00	16:25

Changes to trading hours will be notified to Participants a reasonable time in advance of such changes.

Trading Phases
Cboe publishes a trading phase indicator via market data. Each indicator and associated phase, along with a detail about trading behaviour in that phase, are described in the table below.

INDICATOR	TRADING PHASE	DESCRIPTION
T	Trading	Indicates continuous trading is taking place. Order entry and off-book reporting channels are open.
U	Post Market Crossing	Indicates Cboe Closing Cross session is taking place (order entry is only available for 3C and off-book reporting channels are open).
R	Off-book Reporting	Indicates off-book reporting channels are open (continuous trading is unavailable and order entry is not permitted).
O	Opening Auction	Indicates that an opening auction is taking place. Order entry and off-book reporting channels remain open but no automated executions are taking place.
E	Closing Auction	Indicates that a closing auction is taking place. Order entry and off-book reporting channels remain open but no automated executions are taking place.
M	Market Order Imbalance Extension Period	Indicates that a market order imbalance extension period following an auction is taking place. Order entry and off-book reporting channels remain open but no automated executions are taking place.
P	Price Monitoring Extension Period	Indicates that a price monitoring extension period following an auction is taking place. Order entry and off-book reporting channels remain open but no automated executions are taking place.
C	Closed	Indicates that the order book is closed and no matching is taking place. Order entry and off-book trade reporting channels are closed.
S	Suspension	Indicates the Cboe Market is in a suspended state. Continuous trading is unavailable, all existing orders are cancelled, order entry and off- book trade reporting is not permitted

N	No Reference Price	Indicates there is no reference price for dark matching available. Dark book matching is unavailable and pegged orders are withdrawn from the market.
V	Volatility Interruption	Volatility Interruption indicates that the static price collar has been reached. This will prevent the acceptance of new aggressive orders that breach the static threshold. For further detail see the Static Price Collar section of the Participant Manual.

30. Trading Days

Cboe MTF
The Cboe MTF will be open for business and offering trading in all Securities where the Listing Market is open on that day. Cboe MTF opening hours and holiday schedule can be found on the Website.

Cboe RM
The Cboe RM will be open for business on all days on which the Cboe MTF is open unless otherwise detailed on the Cboe RM holiday schedule. Cboe RM opening hours and holiday schedule can be found on the Website.

31. Participant Notices and Amendments to the Rules

Cboe shall publish or issue Participant Notices or otherwise notify Participants from time to time relating to such matters as amendments to the Rules, notification of the addition or removal of securities, changes to arrangements for trading a security (for example to reflect corporate actions). Participant Notices will be displayed on the Website and emailed or copied to every Participant where they relate to a Material Amendment to the Rules. Following a Participant Notice of a Material Amendment to the Rules, Cboe will monitor feedback from Participants and may set up a Participant consultation group to consider the proposed Rule further.

32. Fees and Charges

Each Participant shall pay Cboe all applicable fees, charges and costs. These will be set out in the Fee Schedule (as amended from time to time) displayed on the Website.

Any applicable fees, charges and costs imposed by Cboe may also be subject to UK Value Added Tax or any other applicable taxes which each Participant shall also pay.

Cboe reserves the right to charge interest on any amount due to Cboe from the date on which payment was due to the date of actual receipt at such rate or rates as Cboe may specify from time to time in the Fee Schedule.

33. Transaction reporting for Participants that are not subject to MiFID transaction reporting requirements

Before trading can be enabled for a Participant that is not subject to MiFID transaction reporting obligations, the Participant must certify that it can provide Cboe with the information required by Cboe Rule 5.3. This information must be provided to enable Cboe to meet its transaction reporting obligations.

Cboe provides three mechanisms for Participants to provide the required information depending on the nature of their activity.

1) Cboe Regulatory Transaction Reporting Service - Participants can use the service to upload their transaction reporting information daily in a prescribed format using a XML file through a SFTP. Detailed information regarding the operations and specifications is available in the rope Regulatory Transaction Reporting Service Description on the Cboe website.

2) Third party provider – Participants can submit the required information through a third party provider that is certified to provide that information to Cboe on behalf of Participants.

3) DEAL only - where a Participant conducts on-exchange trades in DEAL capacity, Cboe has the information required to generate the required transaction reports if a Participant provides accurate and complete Order Record Keeping information on orders as required by Rule 10.9. This is an opt-in feature at the Bank Code level, allowing for separation of flow where needed and requires certification by the Participant.

Order entry on DEAL only bank codes is subject to a validation on capacity and the information provided to Cboe on orders relating to Rule 10.9 (Identifiers for Order Record Keeping). Identifiers for Order Record Keeping for any given day must be uploaded before 5am at the latest; manual reload of short codes for intra-day additions or amendments is available to Participants through the rope MiFID II Identifier Management Application. Irrespective of the mechanism used, Participants are required to provide accurate and complete information. Failure to do so will be a breach of Rule 5.3 and could lead to disciplinary action against the firm.

Trading activity exempt from Cboe transaction reporting

Certain on-exchange activity may be exempt from transaction reporting. Accordingly, Cboe will not require Participants that are not subject to MiFID transaction reporting obligations to provide the additional information for exempt activity.

If a Participant believes that an exemption applies it should contact Cboe and certify that the activity is exempt. If Cboe agrees that the activity is exempt, the Participant must separate all exempt activity through the use of a separate Bank Code. Exemptions are listed in Article 5 of RTS 22 and include contracts arising exclusively for clearing or settlement purposes.

Trading Venue Transaction Identification Code ("TVTIC")

Whether a Participant is a transaction reporting a Cboe transaction directly to an NCA or to Cboe under Rule 5.3, the following value should be used to populate field 3 (TVTIC):
* base-36 encoded Execution Id, with no zero padding on the left

34. Markets for which Cboe does not consume market data

Cboe does not consume market data for the markets listed below. Accordingly, Cboe does not support Dark Books, Pegged orders in the Integrated Books and Guarded Midpoint orders in Periodic Auctions Book. The markets are:

- Czech Republic
- Hungary
- Poland
- Germany, Frankfurt Stock Exchange only