

POSIT MTF

User Guidance

March 2023

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1) Introduction

This document is to be used in conjunction with the POSIT MTF Rulebook (the **Rulebook**) and POSIT MTF Participant Manual (the **Manual**). POSIT MTF FIX and Connectivity Guidance is also available on www.virtu.com (the **Website**). **POSIT MTF universe**

POSIT MTF only accepts orders for the following financial instruments as follows:

Segment:	Equities Dark segment	Periodic Auction segment	RFQ Segment
Asset types	Equity instruments (including shares, depository receipts and certificates)		
	Exchange Traded Funds		
Country/Exchange coverage	<p style="text-align: center;"> <i>Austria - Wiener Borse Belgium - NYSE Euronext Brussels Cyprus - Cyprus Stock Exchange</i> <i>Czech Republic - Prague Stock Exchange</i> <i>Denmark - Nasdaq OMX Copenhagen</i> <i>Finland - Nasdaq OMX Helsinki</i> <i>France - NYSE Euronext Paris</i> <i>Germany - Deutsche Borse Frankfurt Stock Exchange (including XETRA)</i> <i>Greece - Athens Stock Exchange</i> <i>Hungary - Budapest Stock Exchange</i> <i>Ireland - Euronext Dublin</i> <i>Israel – Tel Aviv Stock Exchange</i> <i>Italy - Borsa Italiana Netherlands - NYSE Euronext Amsterdam Norway - Oslo Bors</i> <i>Portugal - NYSE Euronext Lisbon</i> <i>South Africa - Johannesburg Stock Exchange</i> <i>Spain - Bolsa de Madrid</i> <i>Sweden - Nasdaq OMX Stockholm SWX</i> <i>Europe - Pan-European Exchange</i> <i>Turkey – Istanbul Stock Exchange</i> <i>United Kingdom - London Stock Exchange (including AIM and International Order Book (IOB))</i> </p>		

A list of financial instruments currently in the POSIT MTF universe of tradable financial instruments is available at the Website.

2) POSIT MTF trading calendar, hours and trading sessions

POSIT MTF allows trading on business days (Monday to Friday) for financial instruments where the primary listing market is open for trading. Where a primary listing market is closed on a business day then POSIT MTF will be closed for all securities in that market.

The trading hours of each of the segments of POSIT MTF are as follows:

Equities Dark segment

POSITNow matches: Between the hours of 08:00 and 16:30 British Standard Time inclusive

POSIT Close matches: Between the hours of 16:35 and 17:00 British Standard Time inclusive

Periodic Auction segment

Intraday session: Between the hours of 08:00 and 16:30 British Standard Time inclusive

After hours session: Between the hours of 16:35 and 17:00 British Standard Time inclusive

RFQ segment

RFQ trading: Between the hours of 08:00 and 17:00 British Standard Time inclusive

Virtu Europe Trading Limited (**VETL** or **the Operator**) will only change the calendar and/ or hours of operation of any of the segments of POSIT MTF after giving reasonable notice at the Website.

3) Market segments

Participants may interact in any one of the following POSIT MTF market segments:

- Equities Dark Segment
- Equities Periodic Auction Segment (**POSIT Auction**)
- RFQ Segment

Participants can only interact within the respective system for which they have been accepted to enter orders. Orders sent to a system will not be available for interacting in other systems in POSIT MTF.

4) Equities Dark Segment – Functional summary

5.1 Matching Logic

POSITNow system:

Orders may enter the system availing of the pre-trade transparency **Reference Price Waiver ("RPW")** subject to these orders being entered with a **Midpoint Peg**, and as such, may only match at the midpoint of the prevailing primary market best bid offer ("PBBO").

Orders availing of the pre-trade transparency **Large in Scale Waiver ("LIS")** may be entered to the system at any price. These orders may only match within the prevailing PBBO. LIS orders may also enter the system with pegged price instructions which may only match at the specified peg or better.

Both RPW and LIS orders are matched one-to-one with the following priority:

Order Type	Matching Priority
RPW	Size / Time
LIS	Price / Size / Time

In instances where LIS orders match and trade but do not complete, the remainder of the order will continue avail of the LIS waiver (even if the remaining quantity is below LIS) until cancelled or the end of the trading day.

There must be a tradable bid and offer on the primary listing market for any trading to take place. Where a financial instrument is halted or suspended on the primary listing market, then no trading will take place. Trading will resume once the MTF detects that the halt or suspension has been removed and the financial instrument has tradable bid/offer quotes on its primary listing market.

POSIT Close System:

Orders are matched on a pro rata size basis at the closing price of the financial instrument on its primary listing market.

5.2 Supported order types and order protection constraints

The following orders types are supported: **Market** or **Limit**.

Participants may additionally choose to include each of the following trading constraints: **Minimum Quantity** and **Self Match**.

The following order time in force instructions are supported: **DAY** or **Immediate or Cancel (IOC)**. An expiry time may also be specified.

See 'Order types' for more details.

5) Equities Periodic Auction Segment

6.1 Matching logic

A lit periodic auction segment running auctions at frequent intervals with randomised timing and subject to certain conditions being met, such auctions being triggered on receipt and acceptance of a buy or sell order into the system segment;

POSIT Auction contains two separate trading sessions: (1) Intraday and (2) After hours. Orders must state which trading session the respective order is to be submitted to.

For each session POSIT Auction will run an auction for a financial instrument as soon as there is a trading opportunity for that particular financial instrument within the POSIT Auction segment. The fixed call period and maximum random call period will be made public on the Website. Unless otherwise stated, the default period will be a fixed call period of 50 milliseconds and a maximum of 50 milliseconds for the random call period.

Orders will participate in any potential auctions until any specified expiration time or time in force instruction on the order; the order is fully filled; cancellation of the order (by the relevant participant or by the Operator); or the end of the trading session.

Any orders unmatched at the end of trading session will be cancelled.

Orders will be accepted prior to the opening times of each session but no trading will take place until the market open hours.

Price determination rule: Where there are matching buy and sell orders within the system, a single match price is determined based on the open orders within the auction period and through a **Price Determination Rule**. The Price Determination Rule will identify:

- (1) Maximum executable volume, the price(s)* that maximizes the number of shares that can be executed, taking into consideration any order protection constraints and the allocation logic;
- (2) If there are multiple price levels identified in (1) that achieve maximum executable volume then take the price that is closest to the Reference Price. For auctions during the regular trading session the Reference Price will be the current the midpoint of the prevailing best bid and best offer of the financial instrument's primary listing market ("PBBO"). For auctions After hours the Reference Price will be the Primary Market Closing Price of the financial instrument's primary listing market; and
- (3) If there are two price levels identified in (2) that are equally distant from the Reference Price, then the highest price will be taken.

** The price levels that will be assessed for maximum executable volume will be at a tick size or half a tick of the PBBO*

The Price Determination Rule will result in a single price.

The Price Determination Rule is for indicative price calculation and for calculating the final execution price for the auction.

Allocation: Where there are multiple buy orders or sell orders that could execute at a given price level and not all order sizes can be filled from the match then orders will be matched based in the order of priority: Participant/User, Size and Time.

- (i) **Participant/User priority** – where there are matching buy and sell orders from the same Participant/User at the price identified from the Price Determination Rule, match these orders first, followed by,
- (ii) **Size priority** – orders that are largest in size first followed by,
- (iii) **Time priority** – orders in order of earliest order entry time

Orders will remain in the MTF for matching until they are matched, cancelled, expired or at the end of the trading session.

Orders may be accepted by the system prior to the opening times of each trading session but no trading will take place until the start of market trading hours.

6.2 Supported order types and order protection constraints

Orders types supported: **Market** or **Limit** must be specified.

A **Peg Bid, Mid** or **Ask** instruction can be specified for the intraday session, where the peg is pegged to the primary market listing of the relevant financial instrument. A **Peg Closing price** can be added for the After-hours session, where the peg is pegged to the closing price of the primary market listing for the relevant financial instrument.

Participants may additionally choose to include each of the following trading constraints: **Minimum Quantity** and **Self Match, At Price**.

Minimum Quantity can be specified as either MAQ or MES. Participants must instruct the Operator of their preference for Minimum Quantity to be treated as MAQ or MES as a participant level setting.

The following order time in force instructions are supported: **DAY** or **IOC**. An expiry time may also be specified.

At price – when specified, a limit or pegged order can only execute at this price.

See section 11 'Order types' for more details.

6.3 Trading collars

To protect the market and participants against adverse price execution, the system will apply a price collar for Price Determination. During the regular trading session the default price collar will be set at the European Best Bid Offer (**EBBO**) for the relevant financial instrument where trading can only take place at or within the EBBO.

Where there are orders with an "At Price" order constraint outside of the EBBO, the current European High/Low of the day for the relevant financial instrument will apply as an alternative collar. This alternative collar will only apply to orders that have an "At price" order constraint and will prevent the trading of these orders outside of the European High or Low of the day for the relevant financial instrument.

During the After hours trading session the collar will be set at a predefined number of ticks from the Primary Market Closing Price. The predefined number of ticks will be based on the average spread size of each financial instrument and recalculated periodically. The number of ticks for this After hours collar will be made publically available via the POSIT MTF Universe File. The price determination rule will not consider prices that are outside the collar. If the only price from the price determination rule is outside of the collar then no matching (indicative or trade) can occur. If there is no collar that can be determined then no trading will take place.

Definition of EBBO: The EBBO is constructed by the Operator as the best displayed bid order and best displayed sell order from a defined list of exchanges per financial instrument (including the relevant financial instrument's primary market listing). For each financial instrument in the MTF universe, an EBBO is constructed in real-time using the Operator's market data technology.

The EBBO consolidates the best bid and best offers from the following markets, where available: primary market listing, Cboe's CXE and BXE lit order books and Turquoise. Any changes to these markets that are to be included in the EBBO will be communicated to participants.

Definition of European High/Low: The European High/Low is constructed by the Operator as the current day's Highest and Lowest traded price from the start of trading from a defined list of exchanges per financial instrument (including the relevant financial instrument's primary listing). For each financial instrument in the MTF universe, a High and Low traded price is calculated in real-time using the Operator's market data technology.

The European High/Low will initially consolidate the Highest and Lowest trading price from the following markets, where available: primary listing market, Cboe's CXE and BXE lit order books and Turquoise. These markets, that are to be included, are the same markets that are used for the EBBO calculation.

6.4 Order cancels and downward amendments

To protect participants against adverse price execution, the system will not accept order cancel requests or downward amendments during an auction. Downward amendments include a reduction in order size or a more passive limit price change. Upward amendments that include an increase in size or a more aggressive limit price change will be accepted on arrival into the system.

6.5 Market data publication

The following information is made available for each auction:

- Indicative price: The price at which the system has identified a trading opportunity, using the price determination rule
- Indicative volumes: The volume that would execute for the Indicative price identified above

Publication mechanism: A real-time market data feed, provided by the Operator, is made available for the pre-trade market data information (**MD feed**).

To access the MD feed please contact the Operator using the contacts supplied in this document. Further details of the MD feed are also available via the POSIT MTF market data technical specification document on the Website.

6) RFQ Segment

7.1 Functional overview

The RFQ Segment is a request for quote system that publicly disseminates quotes and the attached volumes information on a pre-trade transparent basis, unless a pre-trade transparency waiver is applicable. The system executes transactions exclusively between a quote requester and a quote provider. This is a separate segment from all other POSIT MTF segments and quotes in the RFQ Segment do not cross with orders in the Equities Dark Segment or in the Periodic Auction Segment.

7.1.1 RFQ Creation

One or more request for quotes (each an **RFQ**) can be created by an RFQ quote requestor (an **RFQ Sender**). The RFQ must contain the information set out in section 7.3 (RFQ parameters) below.

7.1.2 RFQ Initiation

The RFQ Sender will specify which RFQ quote providers (each an **RFQ Receiver**) it wishes to receive quotes from. The system's logic will only allow participants that have a pre-established communication link with the relevant RFQ Sender to be selected for a quote provision.

7.1.3 RFQ Acceptance

Each RFQ Receiver can accept (an **RFQ Acceptance**) or reject the relevant RFQ. In the event that the RFQ is neither accepted nor rejected by the RFQ Receiver, the RFQ Sender can replace the RFQ Receiver with another RFQ Receiver or simply remove them from further interaction in the RFQ process.

7.1.4 RFQ Quote provision

After an RFQ Acceptance, each relevant RFQ Receiver should respond with the provision of a quote. The quote can be withdrawn or updated during the quote provision window. The quote will be indicative or firm.

7.1.5 Indicative Quote Selection

If an indicative quote is made available, the RFQ Sender will select their preferred quote(s) from the indicative quotes provided by the RFQ Receiver. The selected RFQ Receiver(s) will be requested to submit a firm quote.

7.1.6 Firm RFQ Acceptance

The RFQ Receiver can accept or reject the request for a firm quote. In the event that the RFQ is neither accepted nor rejected by the RFQ Receiver the RFQ Sender can cancel the request. The RFQ status will revert to the indicative quote selection stage.

7.1.7 Firm Quote Provision

Once the firm quote request is accepted, the RFQ Receiver should respond with the provision of a firm quote. The quote can be withdrawn or updated during the quote provision window.

7.1.8 Firm Quote Selection

The RFQ Sender will select their preferred quote(s) from the firm quote(s) provided by the RFQ Receiver.

Transactions concluded following the RFQ process are conducted under the rules of POSIT MTF.

7.3 RFQ parameters

An RFQ must contain the following:

- Identification of the RFQ Sender
- Financial instrument
- Size (quantity) – number of shares for the ETF instrument
- Side: Buy, Sell or Two way quote request, where the side is not disclosed
- RFQ types (ETF): Risk or Net Asset Value (**NAV**)
 - o Risk – the price of the ETF to be executed during POSIT market hours
 - o NAV – the NAV of the primary listing market of the relevant financial instrument at the end of the instruments trading day, inclusive of any fees/charges for creation/redemption by the RFQ Receiver. NAV is provided by the ETF issuer.
- Timeframe:
 - o Risk - the maximum time for the RFQ Receiver to respond with an firm quote. The RFQ will be cancelled at the end of the current day's POSIT market hours if not executed.
 - o NAV - Good till cancel (**GTC**) is supported and orders will remain in the system until cancelled by the RFQ Sender.

Additionally the RFQ may contain the following parameters:

- Limit price – the minimum quote that the RFQ Sender would be willing to execute at
- Comments – Free text comments to be sent to the RFQ Receiver(s)

7.4 Quote parameters

An indicative or firm quote must contain the following:

- Identification of the RFQ Sender
- Size (quantity) – this is the size specified by the RFQ Sender
- Quote Price
- Validity duration– for indicative quotes, the maximum period of time during which the quote can be accepted.

7.5 Market data publication

All quotes available at the point in time the RFQ Sender has selected his preferred quote will be made public. The price, size and time of each firm quote will be published for at least 100 milliseconds before the transaction is completed.

Executable quotes are made available via the MD Feed

7) Access / Connectivity

Participants may enter orders directly into POSIT MTF through VETL's FIX based connectivity or through other means agreed with VETL. Details are available via the Technical specification document.

RFQ's and quotes for the RFQ segment may be entered via FIX or via VETL's software. Details are available via the Technical specification document.

8) Tick size rules

POSIT MTF follows the tick size rules as prescribed in article 49 of Directive 2014/65/EU. POSIT MTF will assign a tick size per financial instrument based on RTS 11 rules, assigning a tick size based on the financial instrument's Average Daily Number of Transactions (**ADNT**).

Where ADNT not is available for a financial instrument, the MTF will follow the tick size for the highest liquidity band in RTS 11.

The tick size per financial instrument will be made available via the POSIT MTF UK Universe File on the Website.

Any specified limit price on an order, RFQ or quote must meet the relevant financial instrument's defined tick size. This applies to new orders, RFQs and quotes and any amendments to orders, RFQs or quotes. If a specified limit price does not meet the tick size then the order, RFQ or quote will be rejected by POSIT MTF.

9) "Throttle limit"

POSIT MTF imposes a restriction on the number of messages per second from a participant that is controlled at a participant session level. Messages that exceed a "throttle limit" will be rejected. These throttle limits only apply to orders and corrections. Any cancellations will be accepted by POSIT MTF. The throttle limit is set at 2,000 messages per second.

10) Order types

- a) Limit price orders – orders that can be executed at a price that is equal or better to the specified limit price
- b) Market orders – orders that can be executed at any price, within the rules of the relevant segment
- c) Pegged orders – orders that can be executed at a price that is equal or better to the specified peg at the time of execution. Pegs can include:
 - i) Primary Midpoint – pegs to the Midpoint of the current Bid and Offer on the primary listing market of the relevant financial instrument;
 - ii) Primary Aggressive – pegs to the current offer price for buy orders and the current bid for sell orders, in each case, of the current price on the primary listing market of the relevant financial instrument;
 - iii) Primary Passive – pegs to the current bid price for buy orders and the current offer for sell orders, in each case, of the current price on the primary listing market of the relevant financial instrument; and
 - iv) Primary Closing price – pegs to the current day's closing price on the primary listing market of the relevant financial instrument.

Additional constraints that may be applied to orders:

- d) Minimum Acceptable Quantity (MAQ) – the minimum size to be matched;
- e) Minimum Execution Size (MES) – the minimum size to be matched and where at least one contra meets this minimum size;
- f) Self match – when specified, orders may only execute for the same submitting participant or user; and
- g) At price – when specified, a limit or pegged order can only execute at this price.

The following time in force instructions may also be applied to orders:

- h) DAY – orders will remain in the system until the end of the POSIT trading session;
- i) Good for One Auction - (for the POSIT Auction segment only) orders will remain in the system until the end of the next auction in the relevant instrument; and
- j) Good if Auction – (for the POSIT Auction segment only) orders will remain in the system where there is an auction in progress in the relevant instrument at the time the order enters the system, or where an auction in the relevant instrument can be started upon entry of the order into the system.