Document title

# EURONEXT BLOCK (MTF)

Subject

Service Description

| Revision number/ Version number | Date |
|---|---|
| V1.4 | 7 Feb 2018 |

| Number of pages | Author |
|---|---|
| 26 | Cash Equity Team |

## CHANGE CONTROL

| Date | Version | Changes |
|---|---|---|
| 5 May 2017 | 1.0 | Initial Service Description document published |
| 10 October 2017 | 1.1 | Message throttling behaviour added |
| | | Added further details on tick sizes |
| 6 December 2017 | 1.2 | MiFID 2 changes detailed |
| 18 January 2018 | 1.3 | MiFID I LIS thresholds removed |
| | | Clarified procedure around order:trade monitoring |
| 7 February 2018 | 1.4 | Updated message throttling mechanism |

# Contents

# 1. INTRODUCTION

Under MiFID II, the amount of below Large in Scale (LIS) trading that can be executed in today's dark MTFs will be curtailed. Furthermore, Broker Crossing Networks will cease to exist. As appetite for block trading continues to grow, Euronext Block is being launched to provide an additional avenue for seeking Large in Scale liquidity and meeting like-minded counterparties in a single order book designed to allow true price discovery as well as the potential for price improvement. At launch, Euronext Block will allow trading on 15 markets, covering more than 2,000 pan-European instruments.

Participants can submit conditional orders to Euronext Block which are expected to be "firmed up" once a potential match has been identified. Firm orders will be entered in to the auction process immediately once a potential match has been found against opposing liquidity.

"Invitation to Trade" (ITT) messaging can be used to signal trading interest towards targeted counterparties. Rather than passively waiting for orders to match in the dark, Euronext Block allows users to proactively connect with potential counterparties. Liquidity-seeking orders can trigger an optional Invitation to Trade, which in turn will attract natural opposing liquidity. Participants are able to explicitly control both message content and the distribution group to which ITTs are disseminated.

Firm orders are entered into a randomised auction period and executed using a pro-rata volume mechanism designed to execute the greatest number of shares possible for all participants on the book. Execution price will sit as close to the primary market midpoint as possible, however price discovery away from the midpoint is possible as Euronext Block will allow the submission of both limit and market order types, as well as pegged orders.

Clearing for Euronext Block will be provided via EuroCCP, with plans to add additional central clearing counterparties in due course.

The Euronext Block trading platform will be hosted in the existing Basildon data centre and will be accessible using standardised FIX 4.2 messaging.

As all received orders will need to be Large in Scale, there will be no pre-trade visibility of any orders within the Euronext Block book. All executions will sit outside of the double volume caps. Executions will be printed in real-time via a FIX market data feed.

Euronext Block operates as an FCA regulated MTF.

## 2. OVERVIEW OF SYSTEM

Euronext Block is designed as a proactive trading platform. Optional Invitation to Trade (ITT) messages can be generated for both firm and conditional orders. ITTs are distributed to targeted counterparty groups in order to encourage natural liquidity into the order book. Users are able to select pre-determined counterparty groups to receive ITTs. Post launch, we plan to enhance this functionality further to include more granular user-defined counterparty groups, allowing users to restrict disclosure of trading intentions to, for example, specific trading communities.

Euronext Block will operate on a broker-intermediated model; all orders will be routed to the platform by its members.

The diagram below shows a typical workflow of the Euronext Block platform from order submission through to execution with the following steps;

1. Buy-side order is entered into Euronext Block via a member's block-seeking algorithm:
   a. The platform accepts both firm and conditional orders. A firm order is immediately available for an auction, while a conditional order must be firmed up before it can take part in the auction process.
2. If the order was flagged to generate an Invitation to Trade (ITT), then Euronext Block will publish the ITT to potential counterparties.
3. Counterparties that are interested in trading this instrument can then submit their own LIS orders via their broker's block-seeking algorithm.
4. Once a potential match is identified, the auction process will begin and trade(s) are generated and published to counterparties. In the case that one or more conditional orders are involved, a short firm-up period will precede the auction process.

TYPICAL WORKFLOW ON THE EURONEXT BLOCK PLATFORM
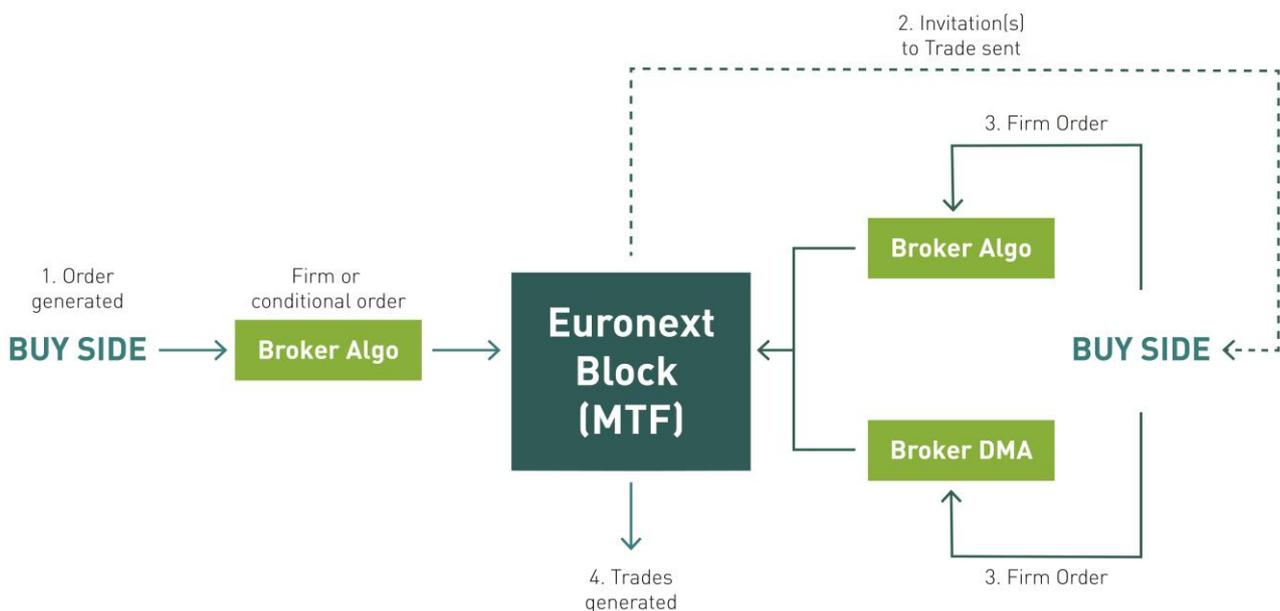
# 3. ORDER ATTRIBUTES

Euronext Block supports various types of order.  The tables below describe each order type with their key attributes that determine the behaviour of the order.

## 3.1    Order Sub Type

Participants of Euronext Block can submit one of two fundamentally different types of order

| Conditional Order | A conditional order can reside on the Order Book but cannot immediately participate in an auction process. Euronext Block continuously scans for potential matches on the book. If a potential match on a conditional order is found, a FIX message is sent back to the sender of the conditional order with a firm-up request. Euronext Block also cancels the original conditional order on behalf of the sender. In order to participate in an auction process, the sender has to send a firm order. |
|---|---|
| Firm Order | A firm order will reside on the order book and can participate in an auction process without any requirement to firm up. If a potential match involving only firm orders is found, an auction process is immediately started. |

## 3.2    Duration (Time in Force)

| Day | A day order is valid until market close of the normal trading day on the day of order entry. A day order will be cancelled at market close. |
|---|---|
| Good Till Cross (GTX) | A GTX order is valid for a single auction uncross only. Any quantity remaining unexecuted after the auction will be cancelled back to the sender. |

## 3.3    Price Conditions

| Market | Market orders are priced at the far side of the primary market reference price. |
|---|---|
| | Market buy orders are pegged to the offer side of the prevailing reference price sourced from the relevant lit book. |
| | Market sell orders are priced at the prevailing bid. |
| Limit | Limit orders can only execute up to (or down to) the price specified in the initial order. |
| | Pricing checks will be in place to ensure that erroneously priced orders are not accepted to Euronext Block. A maximum limit price will be enforced for buy orders at 5% above the best offer on the market of reference. A minimum limit price will be enforced for sell orders of 5% |

| | |
|---|---|
| | below the best bid. |
| Pegged | Mid-peg orders are priced at the midpoint of the primary market bid and ask price. Peg orders can also be pegged to the "far" and "near" side. All peg orders can have a peg cap (limit) price set and a peg offset upon submission. |

## 3.4    Size

| | |
|---|---|
| Minimum Acceptable Quantity (MAQ) | Participants can define their own minimum acceptable quantity (MAQ). This is the minimum number of shares that need to be executed in order for their order to participate in the cross. The MAQ set on the order can be satisfied by multiple counterparties on the opposing side of the book. |

# 4.  AUCTION MECHANISM AND MATCHING EXAMPLES

4.1   The central purpose of Euronext Block is to facilitate block size trading in pan-European equities and equity-like instruments. It will make use of the Large in Scale pre-trade transparency waiver. As a result, all incoming orders will have to meet the Large In Scale (LIS) threshold requirement for the relevant instrument. These LIS thresholds are calculated by ESMA and checked by the platform automatically. The relevant Large in Scale thresholds under both MiFID I and MiFID II are shown in the table below for equities.

| MiFID II Large-in-Scale Thresholds | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **ADT (€)** | ADT < 50 000 | 50 000 ≤ ADT < 100 000 | 100 000 ≤ ADT < 500 000 | 500 000 ≤ ADT < 1 000 000 | 1 000 000 ≤ ADT < 5 000 000 | 5 000 000 ≤ ADT < 25 000 000 | 25 000 000 ≤ ADT < 50 000 000 | 50 000 000 ≤ ADT < 100 000 000 | ADT => 100 000 000 |
| **LIS Minimum (€)** | 15,000 | 30,000 | 60,000 | 100,000 | 200,000 | 300,000 | 400,000 | 500,000 | 650,000 |

4.2   Also, an order in respect of an ETF shall be considered to be large in scale where the order is equal to or larger than EUR 1,000,000.

4.3   In order to verify that the notional order value is above the LIS threshold of the security, all orders will be priced at point of receipt into the order book. Orders are again re-priced at the beginning of an auction period to ensure that they are still greater than or equal to Large in Scale.

4.4   Market orders are priced at the far side.  This means that market buy orders are priced at the primary market of reference offer price, while market sell orders are priced at the primary market of reference bid price.

4.5   Peg orders can be pegged to the mid, near and far side of the primary market of reference for the instrument. Aside from a peg instruction, the order can also have an ultimate limit price. An order pegged to the far side without a limit is, therefore, the same as a market order.

4.6   Limit orders are priced at their respective limit price without a need to use any reference price. The established price is multiplied by the order quantity to calculate notional value.  Euronext Block will reject any new order it receives with a notional value below the LIS minimum for that instrument.

4.7   Once a potential match has been found an auction period will start. At a randomised moment within this period, the auction uncross will be triggered.

4.8   The first step of the auction algorithm is to price all participating orders. This is to ensure that a price decrease of the instrument between the time of order entry and the time of the auction has not led to a decrease in the notional value of the order to below the LIS threshold.

4.9   The only exception to the above are partially executed orders. In line with regulation, these orders are allowed to continue to make use of the LIS waiver and therefore participate in the auction. However, any amendment to a partially executed order by the sender is interpreted as a new order and will therefore have to undergo the LIS check again.

4.10    The auction algorithm will attempt to fill all orders as close to the PBBO midpoint as possible whilst ensuring the maximum number of shares traded. However, the execution price of the match can be anywhere within the primary market spread, or even outside, if that is where buy and sell orders are priced at, offering true price discovery for large orders.  If there is an overlap of such prices, the model will default to the price that is closest to, or exactly at, the midpoint price from the primary market of reference.

In the example below, we assume a primary market spread of 25.58 / 25.60, resulting in a PBBO midpoint of 25.59. The following steps then take place:

- Buyer 1 enters a firm order for 100k shares pegged to the midpoint
- Buyer 2 enters a firm order for 100k shares priced at market
- Buyer 3 enters a firm order for 100k shares pegged at the bid
- Seller 1 enters a firm order for 500k shares pegged to the midpoint

As soon as Seller 1 enters their order, Euronext Block identifies a potential match between buy and sell orders. Assuming that all orders are Firm Orders, a 1.5 second randomised auction period will begin immediately after the potential match is identified.

Buyer 1, 2 and 3 orders are priced at 25.59, 25.60 and 25.58 respectively, while the sell order is priced at 25.59.

In the example below, Buyer 1 and Buyer 2 are both filled against Seller 1 resulting in 200k shares executed at 25.59. Buyer 3's order is priced too low to execute against Seller 1 and therefore does not get executed. Buyer 3's order will remain on the order book and Seller 3's remaining quantity of 300k shares will remain on the order book and both can participate in any subsequent auctions.

EXAMPLE: ORDER ENTRY AND MATCHING
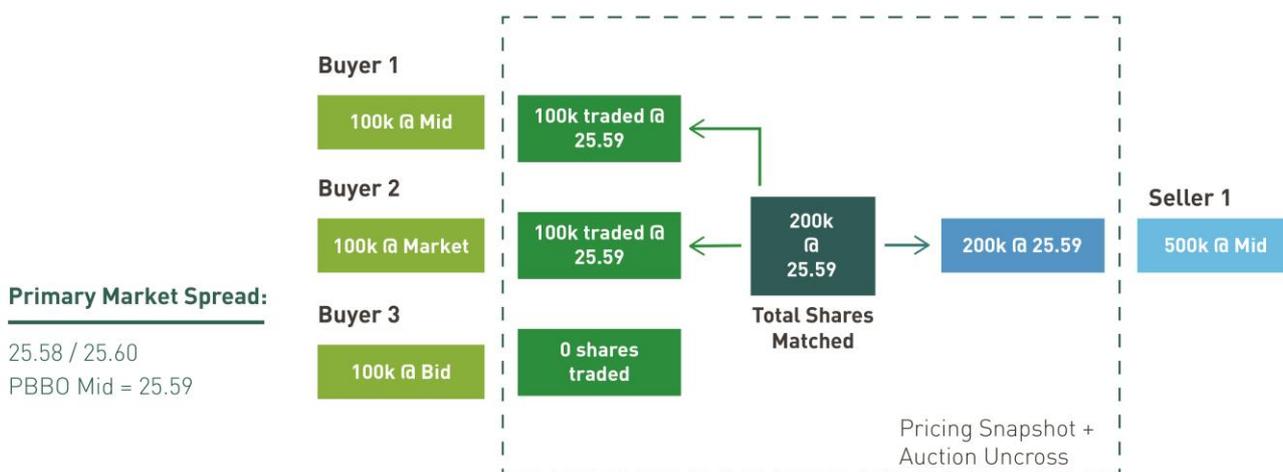
4.11    If more than one order on either side is participating in the auction and the aggregated order quantity cannot be matched, the subsequent number of shares traded will be allocated to each participating order on a pro rata basis. Participants are thus encouraged to submit orders that are as large as possible (i.e. their parent order) to maximise the number of shares executed.

In the example below, we illustrate the way in which price discovery and price improvement take place. With the same primary market spread as before, the following steps take place:

■   Buyer 1 enters a firm order for 50k shares with a limit price of 25.57 (outside of the primary market spread)
■   Buyer 2 enters a firm order for 50k shares pegged to the midpoint
■   Seller 1 is willing to cross the primary spread and enters a firm order for 100k shares with a limit price of 25.57

Even though the primary midpoint is 25.59, the execution price in this scenario is 25.57. Buyer 1 and Seller 1 both execute at their specified limit price (25.57), whilst Buyer 2 benefits from price improvement (25.57) versus their original midpoint peg price instruction (25.59).

EXAMPLE: PRICE DISCOVERY AND PRICE IMPROVEMENT
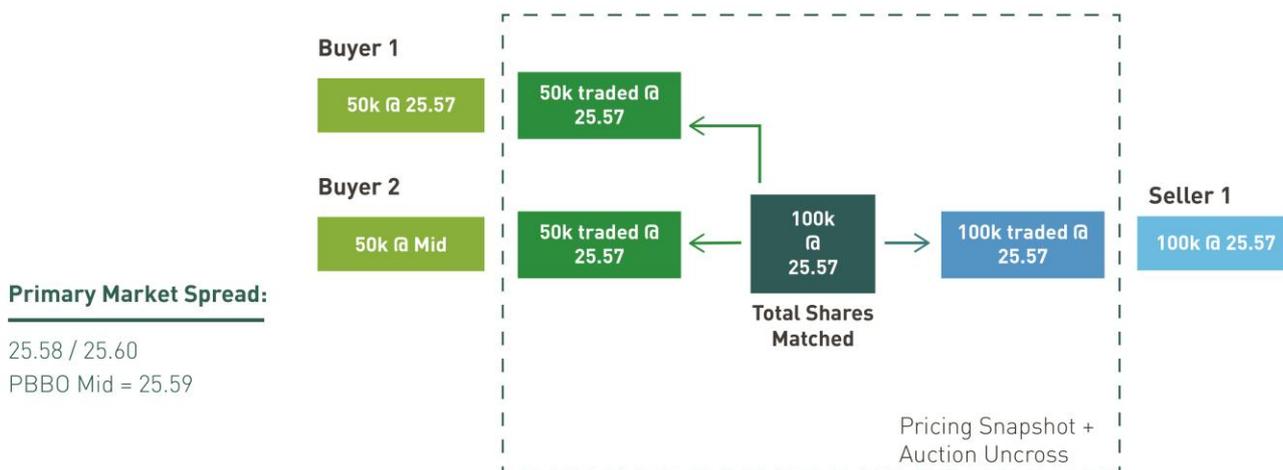
In the example below, we illustrate the pro-rata allocation mechanism. We assume the same primary market spread of 25.80 / 25.60, resulting in a PBBO midpoint of 25.59. The following steps then take place:

■ Buyer 1 enters a firm order for 100k shares pegged to the midpoint

■ Buyer 2 enters a firm order for 100k shares pegged to the midpoint

■ Seller 1 enters a firm order for 50k shares pegged to the midpoint

Buyer 1 and Buyer 2 each receive an execution of 25k shares (50% of Seller 1's order).

EXAMPLE: PRO-RATA ALLOCATION MECHANISM
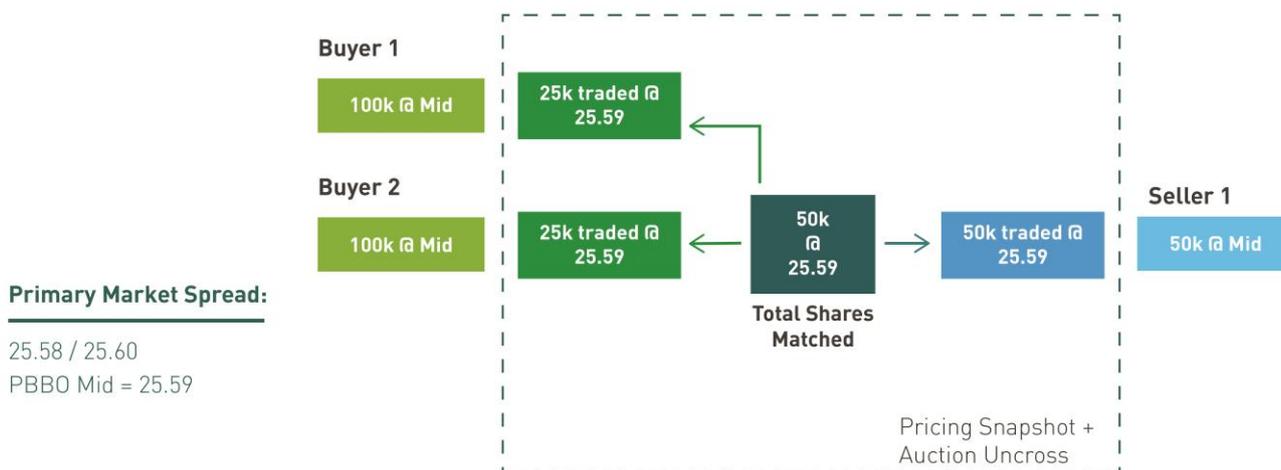


4.12    A firm or conditional order submitted with the optional ITT flag (i.e. ITT distribution enabled) will have priority in the allocation process and will always receive full allocation of shares prior to any pro-rata allocation taking place. Therefore with the use of ITTs to signal trading interest, users can maximise the chance of liquidity discovery within Euronext Block. In the instance where there is more than one order with ITTs triggered, only the first order that distributed ITT messages is given allocation priority. Any subsequent orders with ITTs will receive a pro-rata allocation.

In the example below, Buyer 1 chooses to send an ITT, Buyer 2 and Buyer 3 do not. Subsequently, Buyer 1 receives a full allocation of shares (400k). Buyer 2 and Buyer 3 enter the normal pro-rata volume allocation and therefore are filled for 50k shares each.

4.13    Participants can submit both firm orders and conditional orders in to Euronext Block. Both types of order are admitted to the order book once they clear initial price and Large in Scale validation checks. Euronext Block continuously scans for a potential match for all orders residing on the order book for a specific instrument. Although both conditional and firm orders can rest on the book, only firm orders can be admitted to an auction and therefore lead to an execution.

4.14    If a potential match is found which includes one or more conditional orders, a firm-up period is initiated. This allows the sender of a conditional order a short period of time in which to firm up their order. Euronext Block will send a firm-up request message to the sender of each conditional order. In addition, all relevant conditional orders are automatically cancelled back to their respective sender. Participants will have a 500 millisecond window in which to firm up their conditional orders.  Any firm orders submitted during the initial 500 millisecond window are guaranteed to be included in the upcoming auction.  Additionally, firm orders received after the 500 millisecond window will still be able to participate in the auction if they are received prior to the auction uncross taking place. Any conditional orders received after the firm-up period has begun will be held and released to the order book once the auction process has completed.

4.15    If all relevant conditional orders have been firmed up ahead of the 500 millisecond window, then the firm-up period is ended. Once the firm-up period has ended, the auction process is immediately started.

To illustrate the above point we examine the workflow below:

- Buyer 1 submits a conditional order for 1m shares pegged to the midpoint
- Seller 1 submits a conditional order for 1m shares pegged to the midpoint
- Euronext Block immediately identifies a potential match, generates a firm-up request message to each participant and cancels back both conditional orders to Buyer 1 and Seller 1.
- Buyer 1 and Seller 1 have 500 milliseconds to respond to the firm-up request. If both participants have firmed up after 350 milliseconds (for example) then the auction process will begin immediately.
- The auction process now begins and the uncross will take place at a randomised point in the following 1500 milliseconds.

EXAMPLE: FIRM-UP PROCESS FOR CONDITIONAL ORDERS
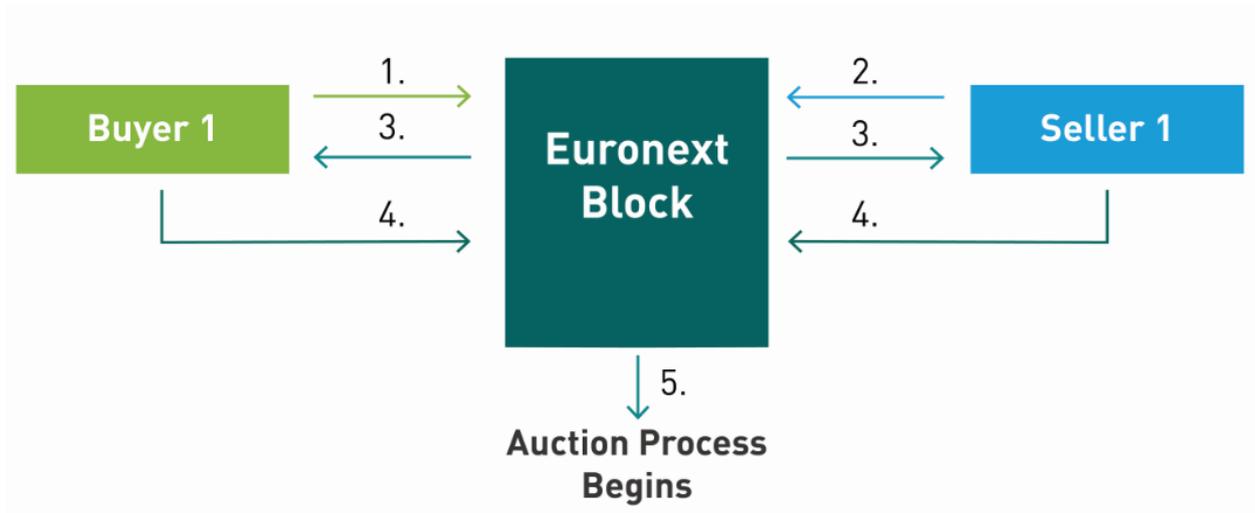


4.16    The auction period has a fixed length, and therefore the auction uncross can take place at any point during this fixed window. The randomised auction process is designed to reduce predictability and therefore minimise the risk of gaming.

The diagram below illustrates the time window for both the firm-up period and the auction period.
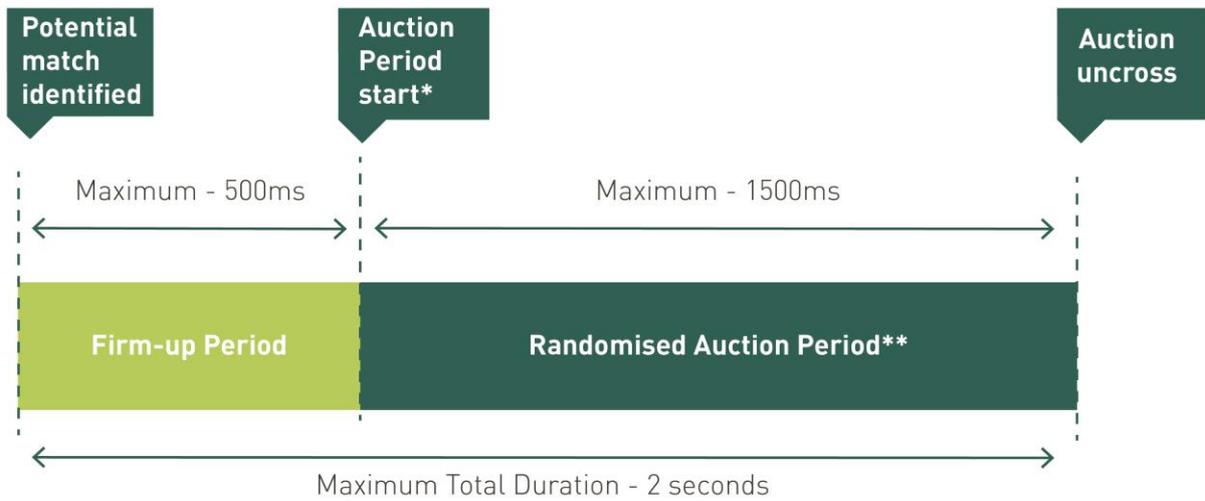
*Auction period starts the moment the last firm-up response has been received or after 500ms, whichever is the sooner.

** During this period the auction uncross is triggered at a randomised moment.
Firm orders can participate in the auction as long as they arrive before the uncross is triggered.

## 5. INVITATION TO TRADE (ITT) MESSAGING

Both firm and conditional orders submitted to Euronext Block can generate Invitation to Trade (ITT) messages to select counterparties. Choosing to send an ITT is optional and is configured on an order-by-order basis. If not specified, then the default option will be that an ITT is not sent.

If a participant opts in to send an ITT then there is further optionality regarding distribution and the content of the ITT message itself.

### 5.1.1 ITT Distribution

Euronext Block participants will initially be able to choose from a pre-selected list of counterparty groupings to be determined by Euronext. The primary groupings available to participants will be "Buy side only", "Sell side only" or "All". Counterparty selection for ITT messaging will be available on an order by order basis.

Further development is planned to introduce user-defined custom groupings of participants which can subsequently be used to target ITTs in a more granular manner.

When an ITT message is sent to a group, participants outside that ITT group will not receive any ITTs but will still participate in an auction process if they have firm or conditional orders resting on the book in that instrument.

ITT messages are distributed directly to specific counterparty groups via a FIX execution report message. These messages are expected to be consumed electronically and used for electronic algo-routing decisions. For participants who have opted in for the service, ITTs will also be published via Bloomberg's "IOI" function. These are expected to be read by human traders who are then able to submit block orders to Euronext Block via their broker's algorithms.

### 5.1.2 ITT Message Content

Users that opt in to send an ITT are able to customise their ITT messaging by controlling the content of the message sent to counterparties. If an ITT is marked as blind by the participant (default), then only an indicator of the size of the order (small / medium / large) will be disclosed. Small, medium and large are defined as a multiple of the Large-in-Scale notional value of that particular instrument whereby;

- Small represents an order of 0 to 3 multiples of LIS for that instrument
- Medium represents an order of 3 to 5 multiples of LIS for that instrument
- Large represents an order of 5 multiples of LIS or greater for that instrument

If an ITT is marked as disclosed by the participant, then the following order attributes are disclosed:

- Side of the order (buy, sell)
- Indicator of size (small, medium, large)
- Indication of price (in-line or away, "in-line" meaning inside the primary market of reference spread, "away" meaning outside the spread)

In the example below, Buyer 1 has opted to generate an ITT to a specific group of counterparties (i.e. buy-side only). Counterparties 1, 2, 3 and 4 all receive Buyer 1's ITT and are subsequently encouraged to submit liquidity into the order book for that instrument. Counterparties 5 and 6 sit outside of Buyer 1's preferred distribution network, therefore will not be notified.

In the same example, Buyer 2 is working a more conservative order and so has chosen not to generate ITTs to any potential counterparties. Buyer 2's order(s) will still participate in any upcoming auction processes in the case that a potential match is found.
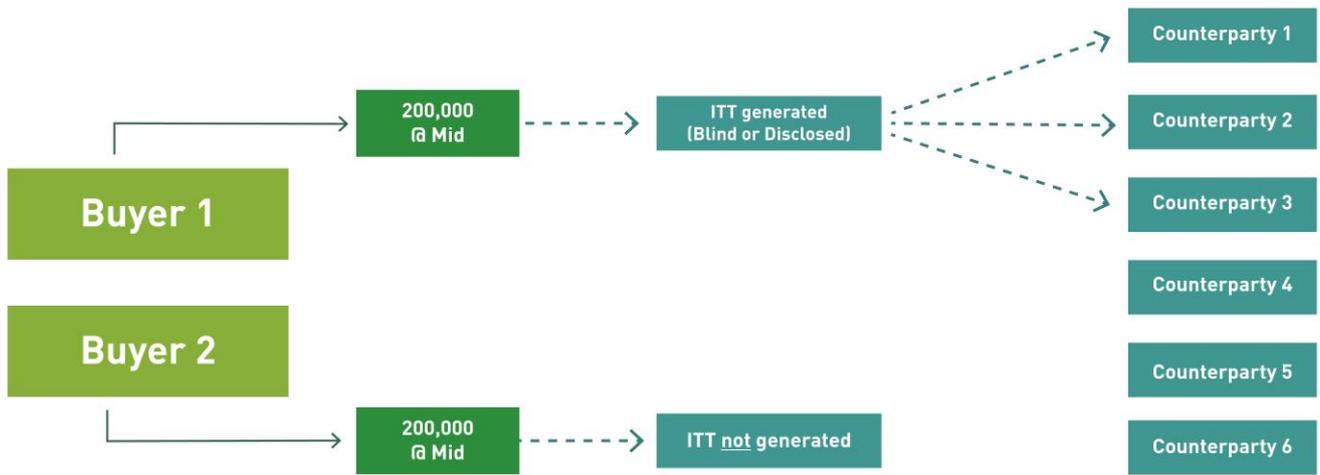
# 6. TRADING CALENDAR, REFERENCE DATA

## 6.1 Trading Calendar

Trading will be supported in the 15 markets listed below. Trading hours will mirror the trading schedule of the primary market as per common practice at other MTFs. An exception to this rule is where Euronext markets are closed for the day. In this instance Euronext Block will not be available to users.

## 6.2 Instrument Universe

Euronext Block will offer trading in pan-European securities across the following markets:

- Austria
- Belgium
- Denmark
- Finland
- France
- Germany
- Ireland
- Italy
- Netherlands
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- UK

## 6.3 Symbology and Currencies

Euronext Block maintains a security master file for all securities eligible to trade on the MTF. An instrument is uniquely identified by:

- ISIN code
- MIC (primary market; Market Identifier Code)
- Trading Currency

Euronext Block supports trading in the following currencies:

- GBX
- GBP
- EUR
- CHF
- DKK
- NOK
- SEK
- USD

The list of all instruments traded on Euronext Block is available on the Euronext website.

## 6.4     Tick Size

For all Limit orders Euronext Block follows the tick size structure as defined by the primary market of reference for each instrument. Limit orders entered with a price which violates the tick size will be rejected.
Peg orders are not validated for tick size and subsequently may execute at a price that is more granular than the relevant tick size.
Where the execution price has more than four decimal places then the match mid-price will be rounded up to four decimal places.

## 6.5     Reference Data

Instrument reference data will be published on the Euronext website in a flat file format. It will also be possible to access instrument reference data over the Euronext Block FIX protocol.

## 7.    MARKET DATA

### 7.1    Incoming

Euronext will receive direct low latency market data feeds from the primary markets via a third party provider. This market data feed will be used to price pegged orders and market orders and also to perform price validation checks.

In the event that the primary market of reference is locked (where bid price = offer price) or crossed (where bid price > offer price) then no auction uncross will take place. Equally, in the event that an instrument is marked as "halted" or "suspended" on the market data feed, no uncross will take place.

### 7.2    Outgoing

Members, market data vendors and potentially other parties can subscribe to Euronext's post-trade market data feed. Trades will be published in real-time. No orders or Invitation To Trade messaging will be published via Euronext's market data feed.

Market data subscribers will be able to connect via a standardised FIX protocol.

## 8.    ANALYTICS

8.1      Safeguard

Safeguard analytics are designed to monitor the quality of liquidity interaction within the platform, in particular the quality of ITTs, block executions, and also the individual participant counterparty selection process.  There are two types of safeguard analytics to be provided with Euronext Block: scorecarding and order/execution audit trail.

8.1.1    Scorecarding - to effectively monitor each participant's behaviour for block interaction, particularly the quality of ITTs, a scorecarding methodology will be used to rank participant activity.  Results will be based on the order characteristics of each participant such as order type (i.e. conditional order vs. firm) and pricing instruction (i.e. limit, mid-price peg, outside spread).  To ensure fair evaluation, each participant's behaviour will be scored based on behaviour observed in the relevant peer group.  Key scorecarding metrics will include firm up ratio.

8.1.2    Order execution audit trail - to support counterparty selection from a Best Execution perspective, a full audit trail report will be provided for participants to review order interaction history including ITT initiation, counterparty selection and matching/final execution.  The report will also be supported by relevant execution performance metrics to assist Best Execution monitoring obligations.

8.2      Post-trade Analytics

Post-trade Analytics are designed to monitor the quality of block trades executed via the Euronext Block platform. They also provide market toxicity analysis to monitor for unusual market behaviour both before and after block executions. Post-trade analytics will be provided in partnership with a third-party TCA provider.

8.2.1    Block quality analysis - designed to provide participants with in-depth insights into the platform's ability to capture high quality block liquidity.  The overall cost of block execution will be examined in detail, using a combination of analysis metrics including opportunity cost, impact cost and the prevailing share price at point of execution.

8.2.2    Market toxicity analysis - designed to ensure the integrity of Euronext Block. Using  price reversion analysis and market volume metrics, prior to and after execution, this detailed analysis will help to pinpoint any unusual market behaviour around point of execution across all venues. Significant price dislocation will be closely monitored in order to ensure a fair and safe trading environment for all participants.

## 9. MESSAGE THROTTLING MECHANISM

Clients are limited to 100 incoming messages per second, per session. Any messages sent that exceed this limit will be rejected with a Business Message Reject detailed in the Euronext Block FIX Order Entry specifications.

If the above limit is exceeded more than 5 times in a single 30 second time window, the following actions will take place:

1.    The FIX session will be logged out

2.    All orders that were submitted by this FIX session will be cancelled

3.    The FIX session will be deactivated and the client is expected to contact Euronext support in order to

       reactivate the relevant session

## 10. ORDER : TRADE RATIO PROCEDURE

As required by MiFID II, Euronext will calculate and monitor the order-to-trade ratio of unexecuted firm orders to transactions on the basis of both 'volumes' and 'value'. This section details the limits to be applied for Euronext markets.

Following the release of the Commission Delegated Regulation 18/05/2016 C(2016) 2775 on the ratio of unexecuted orders to transactions, trading venues should put in place a number of systems, procedures and arrangements to ensure that algorithmic trading systems do not create disorderly trading conditions, and to limit the ratio of unexecuted orders to transactions.

Euronext will therefore calculate the ratio of unexecuted orders to transactions on a regular basis per member and per financial instrument. Please note that in the case of no trades, the ratio will be considered equal to the numerator. Monitoring has begun as of the implementation of MiFID II on 3 January 2018.

For Euronext Block, an unexecuted order-to-trade ratio of **25:1** per second will be applied. A volume ratio of **100,000,000:1** per second will also be applied.

Euronext will monitor participants in order to detect when ratios are breached. Where significant changes in a participant's ratio are detected, that participant will receive an alert from Euronext's Client Coverage Centre on a T+1 basis. Euronext will continuously monitor market conditions and may adjust the ratios if necessary. Access to the market will not be suspended nor will additional fees be associated with this particular ratio.

## 11.   VALUE AND VOLUME-BASED RISK CONTROLS

Euronext Block will restrict order entry for orders above €100,000,000:

(i)       value (order quantity x price (x exchange rate when needed)) < €100,000,000

Euronext Block will also implement a limit based on the quantity:

(ii)       volume (order quantity) = < (€100,000,000 / last traded price ( / exchange rate when needed))

Everyday day, these limits will be available in the Euronext Block reference data files.

## 12.   ALGORITHM TESTING AND SYSTEM CAPACITY TESTING

Capacity testing is conducted on a daily basis in the Euronext Block test environment in order to ensure that the system can handle higher than expected volume. **100** orders per second are sent across a symbol universe of 20 instruments throughout the trading day. This symbol universe is detailed below and is made available to help clients with their own testing needs.

As platform activity grows, Euronext will continue to "pressure test" the Euronext Block test environment to ensure that capacity is consistent with anticipated future trading volumes with a comfortable margin built-in in order to handle peak usage periods.

In addition to the capacity testing described above, we offer facilities to clients to tests their algorithms.

We are able to replicate "disorderly" market conditions in UAT for clients to conduct such tests with the following methodology;

•        Order entry is simulated at a higher rate than usual for one hour per day at 15:00 UK
•        **200** orders per second are sent across the same symbol universe detailed below

| ISIN CODE | CURRENCY ID | MARKET MIC | NAME | ASSET CLASS | LIS | MAX ORDER VALUE | UMTF |
|---|---|---|---|---|---|---|---|
| CH0011075394 | CHF | XVTX | ZURICH INSURANCE G | SHRS | 585100 | 117020000 | ZURNz |
| CH0012005267 | CHF | XVTX | NOVARTIS N | SHRS | 585100 | 117020000 | NOVNz |
| CH0038863350 | CHF | XVTX | NESTLE NOM. | SHRS | 585100 | 117020000 | NESNz |
| CH0244767585 | CHF | XVTX | UBS GROUP AG | SHRS | 585100 | 117020000 | UBSGz |
| DE0005140008 | EUR | XETR | DEUTSCHE BANK | SHRS | 500000 | 100000000 | DBKd |
| DE0007100000 | EUR | XETR | DAIMLER | SHRS | 500000 | 100000000 | DAId |
| DE0007164600 | EUR | XETR | SAP SE | SHRS | 500000 | 100000000 | SAPd |
| DE0007236101 | EUR | XETR | SIEMENS | SHRS | 500000 | 100000000 | SIEd |
| DE0008404005 | EUR | XETR | ALLIANZ | SHRS | 500000 | 100000000 | ALVd |
| DE000BASF111 | EUR | XETR | BASF SE | SHRS | 500000 | 100000000 | BASd |
| DE000BAY0017 | EUR | XETR | BAYER | SHRS | 500000 | 100000000 | BAYNd |
| IE0000669501 | EUR | XDUB | GLANBIA | SHRS | 250000 | 100000000 | GL9i |
| IE00B010DT83 | EUR | XDUB | C&C GROUP | SHRS | 250000 | 100000000 | GCCi |
| IE00BBR67J55 | EUR | XDUB | GREEN REIT PLC | SHRS | 250000 | 100000000 | GN1i |
| IE00BJMZDW83 | EUR | XDUB | DALATA HOTEL GROUP | SHRS | 250000 | 100000000 | DHGi |
| NO0003054108 | NOK | XOSL | MARINE HARVEST | SHRS | 4625000 | 986830000 | MHGo |
| NO0005052605 | NOK | XOSL | NORSK HYDRO | SHRS | 3700000 | 986830000 | NHYo |
| NO0010031479 | NOK | XOSL | DNB | SHRS | 4625000 | 986830000 | DNBo |
| NO0010096985 | NOK | XOSL | STATOIL | SHRS | 4625000 | 986830000 | STLo |
| NO0010208051 | NOK | XOSL | YARA INTERNATIONAL | SHRS | 3700000 | 986830000 | YARo |

## 13.    TECHNICAL SPECIFICATIONS

Technical specifications for the Euronext Block order entry and market data protocols are available on the Euronext website at the following link;

- https://www.euronext.com/en/blockmtf

## 14. CONTACT DETAILS

For general queries related to Euronext Block, please contact the Block team with email address;

- blockmtf@euronext.com

For any technical issues including Production support, please refer to the Euronext website at the following link;

- https://www.euronext.com/services-support

Alternatively contact the Client Coverage Centre;

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CCC France +33 1 85 148 586

CCC Netherlands +31 2 07 219 586

CCC Portugal +351 2 10 608 586

CCC UK +44 20 76 608 586