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Euronext Block: functional overview

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PREFACE

This document provides a functional overview of the Euronext Block multilateral trading facility (MTF) operated on the Optiq technology. This document provides key information for members of the platform and should be consulted alongside the related documents outlined below.

RELATED DOCUMENTS

The following is a list of the associated documents, available [here](#) and which should be read in conjunction with this document or which provide other relevant information to the user.

- General:
 - Euronext Cash and Derivatives Markets - Optiq File Specifications
 - Euronext File Services User Guide
- Order entry:
 - Euronext Cash Markets - Optiq OEG Client Specifications - SBE Binary Interface
 - Euronext Cash Markets - Optiq OEG Client Specifications - FIX 5.0 Interface
 - Euronext Cash Markets - Optiq Kinematics Specifications
 - Euronext Cash Markets - Optiq Drop Copy Service
 - Euronext Cash Markets - Optiq & TCS Error List
 - Euronext Cash Markets - Optiq OEG SBE Template
- Market data:
 - Euronext Cash Markets - Optiq MDG Client Specifications
 - Euronext Cash Markets - Optiq MDG SBE Template

WHAT'S NEW ?

The following lists only the most recent modification made to this version. For the Document History table, see the Appendix.

Revision No.	Date	Change Description
3.3	16 September 2022	Updated workflows, removed sections 5, 6.1 about WFL

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1. INTRODUCTION

Euronext Block is a large-in-scale (LIS) Equities conditional trading MTF, with 2,500+ stocks available across 12 national European markets, including all Euronext countries: Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, and Sweden. The platform helps members source liquidity on traditionally illiquid stocks, and aims to become the venue of choice for firms seeking unique trading opportunities. The platform facilitates LIS trading on small- mid- and large-cap stocks. This market, dedicated for block trading on European securities is a segment of the current Euronext Brussels Trading Facility MTF.

Investors are in need more than ever of safe trading mechanisms to execute large trades without causing significant price movements on primary markets. Euronext Block will help investors locate natural liquidity on European equities, using state of the art trading venue features.

2. MARKET OVERVIEW

Euronext Block is hosted on Optiq technology and is accessible using the same message protocols as the Euronext Equities Regulated Market: SBE or FIX 5.0.

Euronext Block allows members to submit conditional or firm orders above the LIS threshold in a fully dark trading environment separate from the Central Order Book (COB), with no pre-trade transparency thanks to the LIS waiver. Trading on Euronext Block can take place at the midpoint, both on and off tick, and other order types (limit, pegged) are available as well.

2.1 REGULATION

The European entity for Euronext Block is hosted in Brussels under the Market Identifier Code (MIC) **TNLK**, and is regulated by the Financial Services and Markets Authority (**FSMA**) This entity offers trading for all European markets currently available on Euronext Block: Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, and Sweden.

2.2 MEMBERSHIP AND ACCESS

Members of Euronext markets are automatically granted membership of Euronext Block, under the following conditions:

- (i) they are members of the relevant Euronext Market (Brussels), and if not:
- (ii) they provide the relevant **Euronext Membership Application Form** for Brussels
- (iii) they have the relevant post-trade arrangements in place with EuroCCP and/or LCH SA

While existing members of **Euronext Brussels** will not be required to submit any additional membership forms, a clearing form must be completed to indicate which markets on the platform they wish to trade. This form is available from the Euronext Membership team, and will allow them to verify that all required clearing configurations are in place.

A separate login is required for Euronext Block, but the messaging protocols are identical to the Euronext Equities Regulated Market.

Only brokers members of Euronext Block will have **direct** access to the platform.

Trading is available on Euronext Block throughout the continuous opening hours of the relevant Market of Reference, and trading on these securities is on the same currency as the currency on the Market of Reference.

2.3 KEY ORDER CHARACTERISTICS

The minimum notional order value shall be set at the LIS level. The check of such value is performed upon each new order entry, including order modification. Failing this, the order shall be rejected by the trading system.

All orders can be either firm or conditional, and are only valid for the current trading day. A firm order is immediately available to participate in an auction, whereas a conditional order is not. In the event of a potential match involving one or more conditional orders, the member must confirm their intention to trade.

Both Limit and Pegged orders are available on this market, and pegged orders are priced at a price determined on the basis of the market conditions of the relevant Market of Reference for a given security.

The Pegged orders types are the following:

- (i) "peg primary", i.e. the best limit on the near side of the market;
- (ii) the mid-point of the best limits; or
- (iii) "peg market", i.e. the best limit on the opposite side of the market.

A Minimum Acceptable Quantity (MAQ) as well as Minimum Execution Size (MES) are also provided as an option for members.

2.4 AUCTION MECHANISM

When a potential matching situation is identified, a firm-up period will be triggered followed by a random uncrossing period. During this firm-up period, all new or confirmed orders will be taken into consideration, except for conditional orders that were submitted after the random uncrossing period was triggered.

The execution price will always be as close to the Market of Reference's midpoint as possible, but price discovery away from the midpoint is possible as the platform allows the submission of both limit and pegged orders with offsets

Members will also have the ability to match large orders with MAQ or MES constraints.

2.5 MARKET DATA PUBLICATION

There is no pre-trade transparency on the platform, and only executed trades will be published via the Euronext market data feed. Executions are published in real-time, or automatically deferred if eligible, as per MiFID II thresholds. The maximum delay for transactions eligible to deferred publication is limited to end of day.

The deferral period for trades eligible for deferred publication depends on pre-defined thresholds and the overall traded amount. The deferral possibilities are:

- 60min
 - 120min
 - EOD: After all day orders of the current trading session are cancelled, all remaining deferred trades are published.
- Only the following market data messages will be published for Euronext Block:
 - Start of Day
 - End of Day
 - Health Status
 - Technical Notification
 - Timetable
 - Market Status Change
 - Standing Data
 - Full Trade Information
 - No order book details are published for Euronext Block.

2.6 CLEARING AND SETTLEMENT

Euronext Block has two CCP options:

- LCH SA
- EuroCCP

The platform operates under a preferred Central Counterparty (CCP) model, and LCH SA is the default clearing partner for the following markets:

- Amsterdam
- Brussels
- Lisbon
- Paris

For these markets, however, if participants on both sides of a trade select EuroCCP as their CCP then the executed trade will be cleared by EuroCCP, their designated CCP.

Members will only be authorized to trade markets for which they have access to the default CCP for that market. So, members wishing to trade Amsterdam, Brussels, Lisbon or Paris must have access to at least LCH SA. For all other markets, members must have access to EuroCCP.

Members must have CCP authorizations in place before being granted access to the platform, for each of the relevant markets.

While this is the CCP setup currently available, this could evolve over time, allowing for more flexibility and greater CCP coverage.

3. MATCHING PRINCIPLES

The platform supports various order types, but certain parameters must be met in order for an auction to be triggered, and for trades to take place.

Both firm and conditional orders are accepted, but only firm orders can participate in the auction; members must “firm-up” their conditional orders once a potential match has been identified.

The matching process is designed to help participants maximize the quantity traded during an auction. Fill rates will be improved for larger block orders thanks to the quantity (size) priority in place on the matching engine, and members will also be able to match large order with MAQ or MES constraints.

3.1 TRADING STATUS OVERVIEW

The order book will be in a call phase during the trading day, and will only move into an auction when there is potential for two or more orders to match, at which point the randomized uncrossing period is triggered.

Before a trade will take place, there will always be an auction period during which a randomized uncrossing will take place.

- The following order book trading statuses are possible:
 - Inaccessible: No operations allowed
 - Closed : During this phase at the end of the day, all orders are cancelled
 - Call: During this phase only uncrossing are allowed
 - Random Uncrossing Period: (please refer to part 1.1.4.2 Instrument Status)
 - Suspended
 - Halted
- The following instrument trading statuses are possible:
 - Scheduled
 - Suspended
 - Tradable State + Waiting for BBO
 - Random Uncrossing Period

3.2 MATCHING KINEMATICS

Trading on Euronext Block involves three steps:

1. Call Phase
2. Potential match identification
3. Firm up and Random uncrossing period

Once the order book opens on a given instrument, the **Call Phase** allows members to send new orders, modify existing orders, or cancel orders. During this phase, firm and conditional orders are accepted and accumulate in the order book. There is no market data published during this phase. This phase ends when there are at least two orders that can potentially match.

An incoming order as well as a change of BBO on the Market of Reference can create a **potential match** between two or more orders, thereby creating the possibility of a match between orders resting in the book. Once either situation occurs, the matching engine automatically cancels all resting conditional orders on that instrument concerned by the potential match (firm orders already in the book remain unchanged). Participants should then re-submit a new firm order to be included in the uncrossing.

The **firm-up period** is initiated as soon as the potential match is identified on the instrument, and resting conditional orders have been cancelled.

The uncrossing is triggered randomly up to 2 minutes following the identification of a potential match. All firm orders submitted before the triggered uncrossing will participate in the matching process. Conditional orders submitted once the firm-up period has begun are not eligible to participate in that auction.

Trades generated following the uncrossing period will be published in the market data feed in real-time, or on a deferred schedule if eligible.

4. ORDER ATTRIBUTES

4.1 LARGE-IN-SCALE (LIS) ORDERS

Only orders with a notional value that is equal to or greater than the MiFID II LIS thresholds for a given instrument will be accepted, and any orders falling below the limits will automatically be rejected by the platform. This ensures for market participants that all orders on the platform are eligible to benefit from the LIS pre-trade transparency waiver.

The MiFID II LIS Thresholds:

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

The price type of incoming orders determines the **source** of the price used to calculate whether it meets the LIS threshold:

- For **Limit** orders, if **Order Quantity * Order Price** is equal to or greater than the pre-trade LIS threshold of the instrument, then the incoming order is accepted into the order book; otherwise it is rejected.
- For **non-Limit** orders, if **Order Quantity * Reference Price** is equal to or greater than the pre-trade LIS threshold of the instrument, then the incoming order is accepted into the order book; otherwise it is rejected.
- In **both** cases, conversion with the relevant currency rate will be applied for non-Euro prices.
 - As this threshold is checked only upon order entry, orders remain eligible even if after being partially matched their remaining amount is below the threshold.
 - The following applies upon order modification:
- Only the *Order Quantity* as specified in the inbound message is taken into account. The *Leaves Quantity* of the corresponding order is ignored;
- For non-Limit orders, an order modification may be rejected because the Reference Price has changed since the order entry of this order, and thus it may no longer be compliant with the pre-trade LIS threshold.

Should a modification request be rejected, the corresponding order remains unchanged in the order book.

4.2 ORDER TYPES

The platform will accept firm orders, as well as conditional orders which must be confirmed before they can participate in an auction. Conditional orders give market participants more control over the execution of their order, and help to prevent an overfill.

A **conditional** order is identical to a **firm** order in terms of message structure and content. However, a conditional order cannot generate a trade (but they can trigger auctions); only a firm order can generate a trade on the platform. The technical message is identical, and the 'firm' or 'conditional' nature of an order is designated using a dedicated flag in **the New Order (01) (D)** message.

4.2.1 Conditional Orders

A conditional order is a LIS order created with a **New Order (01) (D)** message with the *Execution Instruction* set to value '6' 'Conditional Order'.

Conditional orders rest in the book, and the matching engine continually scans all orders on a given instrument to determine if there is a potential matching scenario. Once a potential match has been identified in the order book, members will receive a **Kill (05) (Execution Report 8)** messages for their relevant conditional orders. At this stage, members must re-submit a **New Order (01) (D)** without the *Execution Instruction* set to 'Conditional Order,' thereby creating a **Firm** order which will be eligible to participate in the auction.

Market participants can submit conditional orders in any trading phase during which order entry on an instrument is allowed, but they will not be taken into account if submitted *during* an ongoing auction already triggered by other orders. New conditional orders received after the firm up process has started will not be able to participate in the upcoming auction process but will be held in the book and are therefore taken into consideration for potential matches once the auction process has ended.

As long as an order has the 'Conditional Order' flag set, it will never trade – only orders *without* this flag can generate trades. These are called 'Firm orders' and are described below.

4.2.2 Firm Orders

A firm order is a LIS order created with a **New Order (01) (D)** message.

Market participants can submit firm orders in any trading phase during which order entry on an instrument is allowed. A firm order is a new order, *without* the conditional order indicator. These orders do not require any confirmation from the trading member before participating in an auction.

If a firm order is sent to confirm a conditional order during a potential matching event, the order attributes of the new firm order can be different from the original conditional order.

All firm orders present in the book during an auction will be eligible to participate, and can generate trades during the uncrossing period.

4.3 PRICE TYPES

Participants have several options for pricing orders on the platform, and the various price types can match with each other.

4.3.1 Limit Orders

Limit orders are buy or sell orders that are priced at the specified price limit when the order is received by the system, as well as when the auction is performed. Limit orders can only be executed at the specified price limit or at a better price.

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.

4.3.2 Peg Orders

Pegged orders are buy or sell orders that are priced at a price determined by the Euronext Block trading system on the basis of the market conditions of the relevant Market of Reference for a given instrument when the order is received by the system.

Members must specify which of the following reference prices the order is to be pegged:

- “peg primary”, i.e. the near side of the market;
- the mid-point; or
- “peg market”, i.e. the opposite side of the market.

All pegged orders can include a limit price condition ensuring that they are priced at their specified price limit or at a better price. Pegged orders can only be executed at this determined price, including specified offsets and price limit, or at a better price.

The three types of peg orders accepted by the platform are described in the sections below.

4.3.2.1 Primary Peg

A Primary Peg order is a type of order that follows the best bid or offer from the Market of Reference when buying or selling a security. Offset characteristics are mandatory in the case of a Primary Peg order.

In case of a Buy or Sell order, this offset could be **negative, positive** or **0**.

4.3.2.2 Mid-point Peg

A Midpoint Peg order is a type of order that follows the best bid and best offer from the Market of Reference. Offset characteristics are forbidden for Midpoint Peg orders and if used, the order will be rejected. Since the mid-point peg price is calculated as a mid-price of the bid and offer price, it is possible that the calculated price falls at a sub-tick.

4.3.2.3 Market Peg

A Market Peg order is a type of order that follows the best bid (offer) from the Market of Reference when selling (buying) a security. Offset characteristics are mandatory in the case of a Market Peg order.

In case of a Buy or Sell order, this offset could be **negative, positive** or **0**.

4.4 DURATION (TIME IN FORCE)

Only day orders are accepted on the platform, and are valid until market close of the normal trading day on the day of order entry. All open orders are automatically cancelled at market close.

4.5 MINIMUM QUANTITY TYPES

Each valid order can support one of the two quantity constraints defined below:

- MAQ (Minimum Acceptable Quantity): The Minimum quantity threshold can be met by aggregating multiple orders on the opposite of the book. The algorithm will go through the order book to find a cumulated quantity equal to or greater than the Minimum Quantity.
- MES (Minimum Execution Size): The Minimum quantity threshold can only be met by orders with size equal or larger than the minimum. Multiple orders cannot be aggregated to meet the threshold. The algorithm will go through the order book to find orders with a minimum quantity equal to or greater than the aggregating MES.
- The MAQ and the MES constraints cannot be combined.

4.6 TICK SIZE

For limit orders, the platform follows the tick size structure as defined by the Market of Reference for each instrument. Limit orders entered with a price which violates the tick size will be rejected. Mid-point peg orders are not validated for tick size and subsequently may execute at a price that is more granular than the relevant tick size. If the execution price has more than four decimal places then the matched mid-price will be rounded up to four decimal places.

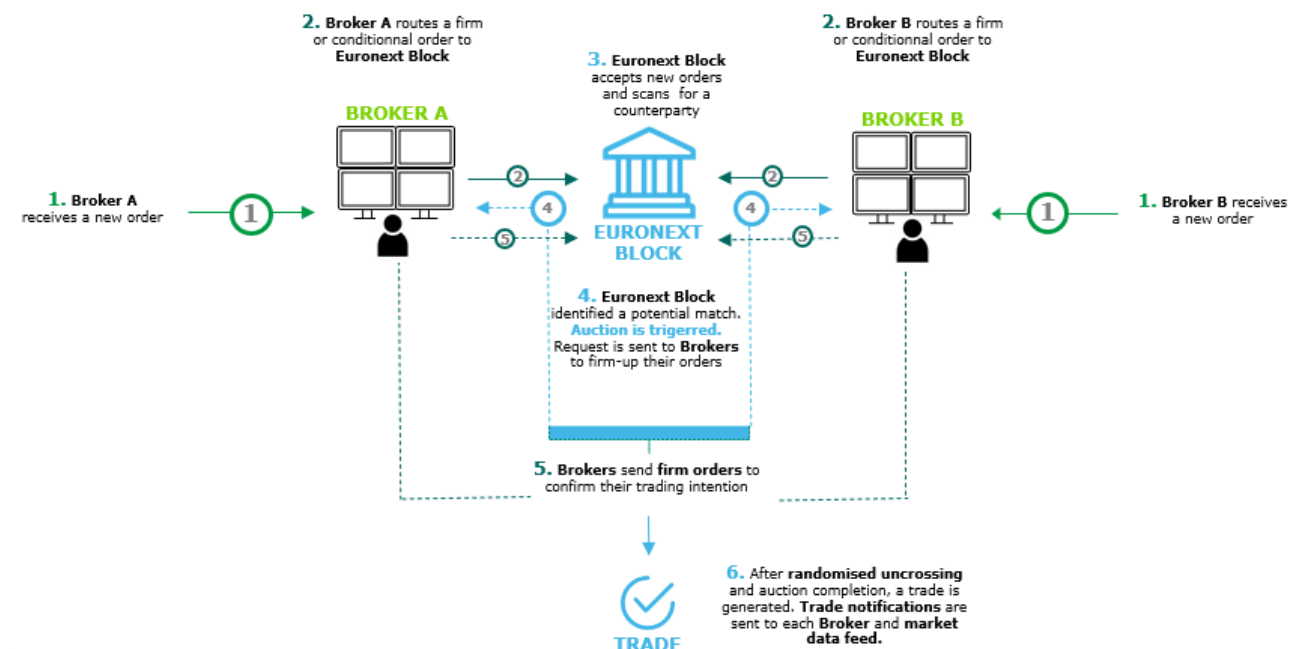
5. WORKFLOW & MATCHING EXAMPLES

The platform is design to maximize the total executed volume during each auction, and a size-time priority is applied during an uncrossing. There are two main elements composing the workflow on the platform:

- NEW ORDERS
- AUCTION MECHANISMS

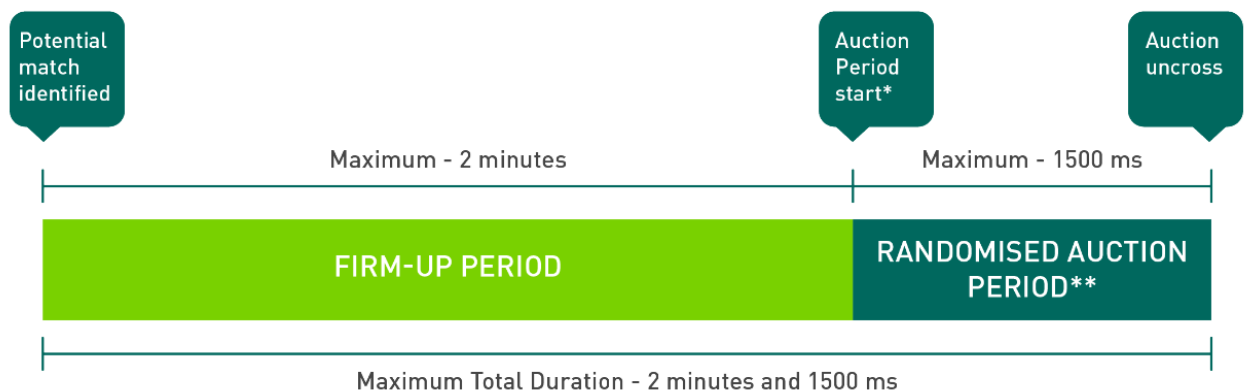
5.1 NEW ORDER WORKFLOW

- Broker A receives an order and routes a firm or conditional order to Euronext Block
- Euronext Block places the order in a dark order book & continually scans for potential counterparts
- Broker B creates a firm or conditional order and routes it to Euronext Block
- Euronext Block identifies a potential match. The Auction is triggered. Conditional orders (if any) are cancelled and requests are sent to each Broker to confirm (firm-up) their orders
- Each Broker confirms their intention to trade by sending new firm orders to Euronext Block
- Once the randomized uncrossing takes place, and the auction completes, a trade is generated and trade notifications are sent to each Broker



5.2 AUCTION MECHANISM

- The auction is triggered when Euronext Block identifies two or more counterparties that have sent in orders (either conditional, or firm) that can potentially match
- Euronext Block automatically cancels the conditional orders which have triggered the auction, and requests Brokers to confirm (or firm-up) their conditional orders
- Brokers confirm by sending in new firm orders during the firm-up period (conditional orders sent during this phase will not participate in the auction)
- The auction uncross is triggered at a randomized moment. Firm orders can participate in the auction as long as they arrive before the uncross is triggered.
- When a trade is matched during the auction uncross, then trade notifications are sent to each counterparty and the trade is published on the Euronext Block market data feed



6. ANALYTICS

The platform is design to maximize the executed volume.

6.1 SCORECARDING

Safeguard analytics are designed to monitor the quality of liquidity interaction within the platform for block executions, and also the individual participant counterparty selection process.

Metrics are in place to monitor each participant's behavior for block interaction, and 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). Key scorecarding metrics will include firm up rates.

7. TRADING CALENDAR & MARKET SCOPE

7.1 TRADING CALENDAR

Trading will be supported in the 12 markets listed below. Trading hours will mirror the trading schedule of the Market of Reference. 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.

7.2 INSTRUMENT UNIVERSE

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

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

7.3 SYMBOLOGY AND CURRENCIES

Reference data for the platform is available on the Euronext market data feed, and on the Euronext File Service.

The reference data, published via "Standing Data" messages, provides information such as:

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

Full message characteristics can be found in the relevant market data specification documents.

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Euronext Block supports trading in the following currencies:

- EUR
- DKK
- NOK
- SEK
- USD

8. VALUE AND VOLUME-BASED RISK CONTROLS

Orders with a notional value above €100,000,000 will not be accepted:

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

Orders will also be limited based on their quantity:

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

9. DEFERRED PUBLICATION REGIME

The platform will automatically perform a check on each trade matched to verify its eligibility for deferred publication.

For eligible trades, post-trade publication will be deferred in accordance with the waiver rules, with the exception that T+1 publication is not possible.

If the transaction is below the relevant minimum qualifying size as set out in the tables below, then the transaction will be made public in real time.

Deferred publication thresholds and delays for shares and depositary receipts		
Average Daily Turnover (ADT) in EUR	Minimum qualifying size of transaction for permitted delay in EUR	Timing of publication after the transaction
>100m	10,000,000	60 minutes
	20,000,000	120 minutes
	35,000,000	End of trading day
50m - 100m	7,000,000	60 minutes
	15,000,000	120 minutes
	25,000,000	End of trading day
25m - 50m	5,000,000	60 minutes
	10,000,000	120 minutes
	12,000,000	End of trading day
5m - 25m	2,500,000	60 minutes
	4,000,000	120 minutes
	5,000,000	End of trading day
1m - 5m	450,000	60 minutes
	750,000	120 minutes
	1,000,000	End of trading day
500,000 - 1m	75,000	60 minutes
	150,000	120 minutes
	225,000	End of trading day
100,000 - 500,000	30,000	60 minutes
	80,000	120 minutes
	120,000	End of trading day
50,000 - 100,000	15,000	60 minutes
	30,000	120 minutes
	50,000	End of trading day
<50,000	7,500	60 minutes
	15,000	120 minutes
	25,000	End of trading day*

*All trades will be published within the given trading day, even if the delays and thresholds allow for T+1 publication. There will be no trade publication beyond the end of the current trading day.

10. DOCUMENT HISTORY

Revision No.	Date	Change Description
1.0	05 May 2017	<ul style="list-style-type: none">Initial Service Description document published
1.1	10 October 2017	<ul style="list-style-type: none">Added further details on tick sizesMessage throttling behaviour added
1.2	6 December 2017	<ul style="list-style-type: none">MiFID 2 changes detailed
1.3	18 January 2018	<ul style="list-style-type: none">MiFID I LIS thresholds removedClarified procedure around order: trade monitoring
1.4	7 February 2018	<ul style="list-style-type: none">Updated message throttling mechanism
2.0	10 September 2020	<ul style="list-style-type: none">Document update to reflect changes related to Optiq migration
3.0	08 January 2021	<ul style="list-style-type: none">Document update to include new WFL message details
3.1	19 March 2021	<ul style="list-style-type: none">Updated offset rules for peg orders
3.2	13 September 2021	<ul style="list-style-type: none">Various updates
3.3	16 September 2022	<ul style="list-style-type: none">Updated workflow (5.1), removed sections 5 & 6.1

APPENDIX A: ORDER BOOK EXAMPLES

The aim of this annex is to provide some examples related to Euronext Block market model. These examples are not exhaustive for all possible cases.

It should be noted that order type (i.e., firm & conditional) is not indicated in the examples below. Order book management and matching principles indicate that **only firm orders** are eligible to trade, so it can be assumed that any conditional order that triggers an auction must be firmed-up before it can trade, and any resting firm orders will be immediately able to trade.

A.1. EXAMPLE 1: NO POSSIBLE MATCHES

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid			
2	50	Mid			
3	50	Mid			
4	20	Mid			

There are four orders in the book, on the buy side only. There is no potential for a trade because there are no sell orders available. The orders in the book are not visible to the market.

A.2. EXAMPLE 2: INCOMING ORDER – MATCHING A SINGLE ORDER

The initial state of the order book, with only buy orders present all priced to the midpoint:

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid			
2	50	Mid			
3	50	Mid			
4	20	Mid			

An incoming sell order priced @ mid enters the book with a quantity of 100 shares.

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid	Mid	100	5
2	50	Mid			
3	50	Mid			
4	20	Mid			

The matching engine identifies a potential match and triggers the auction (conditional orders are firmed up by each counterparty) and a trade takes place for 100 shares at the midpoint price.

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid	Mid	100	5
2	50	Mid			
3	50	Mid			
4	20	Mid			

A.3. EXAMPLE 3: INCOMING ORDER – MATCHING MULTIPLE ORDERS (SIZE-TIME PRIORITY)

The initial state of the order book, with only buy orders present all priced to the midpoint:

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid			
2	50	Mid			
3	50	Mid			
4	20	Mid			

An incoming sell order priced @ mid enters the book with a quantity of 175 shares.

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid	Mid	175	5
2	50	Mid			
3	50	Mid			
4	20	Mid			

The matching engine identifies a potential match and triggers the auction (conditional orders are firmed up by each counterparty) and a trade takes place for 175 shares at the midpoint price.

The buy order with timestamp 3 is only partially executed, because although it had the same quantity as the order with timestamp 3, it was submitted later, so the previous order had time priority and fully executed first.

Order book					
Time	Qty	Price	Price	Qty	Time
1	100	Mid	Mid	175	5
2	50	Mid			
3	50	Mid			
4	20	Mid			

The order book after the trade executed, showing the remaining quantity of the partially executed order:

Order book					
Time	Qty	Price	Price	Qty	Time
3	25	Mid			
4	20	Mid			

A.4. EXAMPLE 4: INCOMING ORDER – MATCHING A SINGLE ORDER (SIZE PRIORITY)

The initial state of the order book, with only buy orders present all priced to the midpoint:

Order book					
Time	Qty	Price	Price	Qty	Time
1	50	Mid			
2	100	Mid			
3	50	Mid			
4	20	Mid			

An incoming sell order priced @ mid enters the book with a quantity of 100 shares.

Order book					
Time	Qty	Price	Price	Qty	Time
1	50	Mid	Mid	100	5
2	100	Mid			
3	50	Mid			
4	20	Mid			

The matching engine identifies a potential match and triggers the auction (conditional orders are firmed up by each counterparty) and a trade takes place for 100 shares at the midpoint price.

The buy order with timestamp 2 is fully executed, because although it was submitted later than the order with timestamp 1, it had a larger quantity, therefore was given **size** priority.

Order book					
Time	Qty	Price	Price	Qty	Time
1	50	Mid	Mid	100	5
2	100	Mid			
3	50	Mid			
4	20	Mid			

The order book after the trade executes:

Order book					
Time	Qty	Price	Price	Qty	Time
1	50	Mid			
3	50	Mid			
4	20	Mid			