

BlockMatch Europe Delayed Market Data File Contents

DESCRIPTION OF FILE CONTENTS

Each file contains messages reflecting both pre-trade and post-trade transparency data for the BlockMatch Europe trading systems. The structure of the data is based upon the message type used for pre-trade and post-trade data.

The contents of the different messages are outlined in the tables below.

There are three types of messages contained within the files:

1. New Quote/AIOI

For a New/Added Quote/AIOI (where Message Type = "F"), the columns represented are as set out below, with example data.

Example: `F|20200316-11:39:55.367593000|2200313012893487|Q|ADSG.I|S|501|166.28|M|0.00||Y|N`

Data fields for New Quote/AIOI:

| Position | Field | Sample Value |
|----------|------------------------------------------|-----------------------------|
| 1 | Message Type | F |
| 2 | Time Stamp (UTC) | 20200316-11:39:55.367593000 |
| 3 | Quote/AIOI ID | 2200313012893487 |
| 4 | Message Type (Q=Quote; A or S = AIOI) | Q |
| 5 | Symbol | ADSG.I |
| 6 | Side | S |
| 7 | Quantity | 501 |
| 8 | Price | 166.28 |
| 9 | Peg Type (M = Mid) | M |
| 10 | Peg Difference | 0 |
| 11 | Attribution (BLANK) | |
| 12 | Firm | Y |
| 13 | Recipients | N |

2. Deleted Quote/AIOI

For a Deleted Quote/AIOI (where Message Type = "D"), the columns represented are set out below with example data.

Example: *D|20200316-11:39:45.347415000|2200313012887227|501*

Data fields for Deleted Quote/AIOI:

| Position | Field | Sample Value |
|----------|----------------------------|-----------------------------|
| 1 | Message Type | D |
| 2 | Time Stamp (UTC) | 20200316-11:39:55.369822000 |
| 3 | Quote/AIOI ID | 2200313012893487 |
| 4 | Number of Shares Cancelled | 501 |

3. Executed Trade

For an Execution (where Message Type = "E"), the columns represented are set out below with example data.

Example: *E | 20200316-11:25:16.292930000 | 2200313012103872 | BFS.A.I | 121 | 24.20 | 220012226 | ERFQ | EUR | 2020-03-16T11:25:16.289940000Z | 2020-03-16T11:25:16.292930000Z | 62-----PH---*

| Position | Field | Sample Value |
|----------|-----------------------------------------------------|--------------------------------|
| 1 | Message Type | E |
| 2 | Time Stamp (UTC) | 20200316-11:25:16.292930000 |
| 3 | Quote/AIOI ID (Only populated for trades from BRFQ) | 2200313012103872 |
| 4 | Symbol | BFS.A.I |
| 5 | Executed Quantity | 121 |
| 6 | Price | 24.2 |
| 7 | Trade ID | 220012226 |
| 8 | Venue (ERFQ, EBLX, ENTW) | ERFQ |
| 9 | Currency | EUR |
| 10 | Trade Timestamp | 2020-03-16T11:25:16.289940000Z |

| | | |
|----|-------------------------------------------|--------------------------------|
| 11 | Publication Timestamp | 2020-03-16T11:25:16.292930000Z |
| 12 | Market Model Topology string – see below) | 6 2 - - - - - P H - - - |

The security identifier for Instinet, “INET” can be used in conjunction with the symbol list, which you can find on blockmatch.com/Europe, to identify the symbol ISIN and currency if required.

Market Model Topology (MMT)

The BlockMatch Europe Market Data file uses the FIX Trading Community’s standard (<https://www.fixtrading.org/mmt/>) to encode trade reporting information into a 14 character string; each character denotes a different aspect of a trade and the table below lays out the different values for BlockMatch Europe executions, their meaning and where they appear in the string.

| | MARKET MECHANISM | TRADING MODE | TRANSACTION TYPE: TRANSACTION CATEGORY | TRANSACTION TYPE: NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER | TRANSACTION TYPE: AGENCY CROSS TRADE INDICATOR | TRANSACTION TYPE: MODIFICATION INDICATOR | TRANSACTION TYPE: BENCHMARK OR REFERENCE PRICE INDICATOR | TRANSACTION TYPE: ORDINARY/STANDARD TRADES OR TRADES OUTSIDE PRICE FORMATION/DISCOVERY PROCESS | TRANSACTION TYPE: ALGORITHMIC INDICATOR | PUBLICATION MODE / POST-TRADE DEFERRAL: REASON | POST-TRADE DEFERRAL OR ENRICHMENT: TYPE | Books | | |
|-------------------------------|------------------|--------------|----------------------------------------|--------------------------------------------------------------------------|------------------------------------------------|------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------------|-------|------|------|
| Category | MMT_0 | MMT_1 | MMT_2 | MMT_3 | MMT_4 | MMT_5 | MMT_6 | MMT_9 | MMT_10 | MMT_11 | MMT_12 | EBLX | ERFQ | ENTW |
| Dark book | 3 | | | | | | | | | | | ✓ | | |
| RFQ | 6 | | | | | | | | | | | | ✓ | |
| Off-book | 1 | | | | | | | | | | | | | ✓ |
| Continuous | | 2 | | | | | | | | | | ✓ | ✓ | |
| Trade Reporting (On Exchange) | | 5 | | | | | | | | | | | | ✓ |
| Dark Trade | | | D | | | | | | | | | ✓ | ✓ | |
| n/a | | | - | | | | | | | | | | ✓ | ✓ |

| | MARKET MECHANISM | TRADING MODE | TRANSACTION TYPE: TRANSACTION CATEGORY | TRANSACTION TYPE: NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER | TRANSACTION TYPE: AGENCY CROSS TRADE INDICATOR | TRANSACTION TYPE: MODIFICATION INDICATOR | TRANSACTION TYPE: BENCHMARK OR REFERENCE PRICE INDICATOR | TRANSACTION TYPE: ORDINARY/STANDARD TRADES OR TRADES OUTSIDE PRICE FORMATION/DISCOVERY PROCESS | TRANSACTION TYPE: ALGORITHMIC INDICATOR | PUBLICATION MODE / POST-TRADE DEFERRAL: REASON | POST-TRADE DEFERRAL OR ENRICHMENT: TYPE | Books | | |
|----------------------------------------------------------------------------|------------------|--------------|----------------------------------------|--------------------------------------------------------------------------|------------------------------------------------|------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------------|-------|------|------|
| Category | MMT_0 | MMT_1 | MMT_2 | MMT_3 | MMT_4 | MMT_5 | MMT_6 | MMT_9 | MMT_10 | MMT_11 | MMT_12 | EBLX | ERFQ | ENTW |
| No Negotiation Indicator | | | | - | | | | | | | | ✓ | ✓ | |
| Negotiated Trade in Illiquid Financial Instruments | | | | 2 | | | | | | | | | | ✓ |
| Negotiated Trade Subject to Conditions Other Than the Current Market Price | | | | 3 | | | | | | | | | | ✓ |
| Negotiated Trade | | | | N | | | | | | | | | | ✓ |
| Trade Cancellation | | | | | | C | | | | | | ✓ | ✓ | ✓ |

| | MARKET MECHANISM | TRADING MODE | TRANSACTION TYPE: TRANSACTION CATEGORY | TRANSACTION TYPE: NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER | TRANSACTION TYPE: AGENCY CROSS TRADE INDICATOR | TRANSACTION TYPE: MODIFICATION INDICATOR | TRANSACTION TYPE: BENCHMARK OR REFERENCE PRICE INDICATOR | TRANSACTION TYPE: ORDINARY/STANDARD TRADES OR TRADES OUTSIDE PRICE FORMATION/DISCOVERY PROCESS | TRANSACTION TYPE: ALGORITHMIC INDICATOR | PUBLICATION MODE / POST-TRADE DEFERRAL: REASON | POST-TRADE DEFERRAL OR ENRICHMENT: TYPE | Books | | |
|-----------------------|------------------|--------------|----------------------------------------|--------------------------------------------------------------------------|------------------------------------------------|------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------|-----------------------------------------|-------|------|------|
| Category | MMT_0 | MMT_1 | MMT_2 | MMT_3 | MMT_4 | MMT_5 | MMT_6 | MMT_9 | MMT_10 | MMT_11 | MMT_12 | EBLX | ERFQ | ENTW |
| Reference Price Trade | | | | | | | S | | | | | ✓ | | |
| Benchmark Trade | | | | | | | B | | | | | | | ✓ |
| Plain Vanilla Trade | | | | | | | | P | | | | ✓ | ✓ | ✓ |
| Technical Trade | | | | | | | | T | | | | | | ✓ |
| Algorithmic Trade | | | | | | | | | H | | | ✓ | ✓ | ✓ |

For example, in the MMT string example in Section 3 above (6 2 - - - - - P H - - -), this denotes that the trade was executed under the following conditions:

- RFQ book (MMT_0 = 6) – executed on the RFQ venue;
- Trade Reported In Continuous Trading (MMT_1 = 2);
- Plain Vanilla Trade (MMT_9 = P) – standard trade within price formation/discovery process;
- Algorithmic Trade (MMT_10 = H) – at least one party to the trade indicated their order was of algorithmic origin.

Please note that some MMT fields are not currently used or planned for BlockMatch Europe and are therefore omitted from this table:

- MMT_7 (TRANSACTION TYPE : SPECIAL DIVIDEND INDICATOR)
- MMT_8 (TRANSACTION TYPE : OFF BOOK AUTOMATED INDICATOR)
- MMT_13 (DUPLICATIVE INDICATOR)