Document title

# EURONEXT CASH MARKETS – OPTIQ® TCS CLIENT SPECIFICATIONS – SBE AND FIX 5.0 INTERFACE

Document type or subject

Optiq® TCS Client Specifications – SBE and FIX 5.0 Interface

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**PURPOSE** This document sets out the client messages specifications for TCS Optiq OEG using the SBE and FIX formats.

## ASSOCIATED DOCUMENTS

The following list of the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- Euronext Cash Markets – OEG Client Specifications – SBE Interface
- Euronext Cash Markets – OEG Client Specifications – FIX 5.0 Interface
- Euronext Cash Markets – CCG to OEG Changes Highlight
- Euronext Cash Markets – Optiq & TCS Error List
- Euronext Cash and Derivatives Markets – Optiq MDG Client Specifications
- Euronext Cash and Derivatives Markets – Optiq File Specifications

Clients are advised to also refer to the Euronext Rules and Regulations documents for more details.

For the latest version of documentation please visit http://www.euronext.com/optiq

## SUPPORT

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## WHAT'S NEW?

All the updates are listed at the end of this document; please refer to the Appendix.

| Version | Change Description |
|---|---|
| 1.4.1 | **The following fields have been modified in SBE & FIX :**<br>- *ID CCP* : Renamed to 'CCP ID'<br>- *IDCCP (*21040) : Renamed to 'CCPID' |

# CONTENTS



# 1. TRADE CONFIRMATION SYSTEM OVERVIEW

## 1.1 INTRODUCTION

Euronext's Trade Confirmation System (TCS) is used for the declaring, publication and reporting of transactions made off the Central Order book (COB) but on-exchange, for all instruments (equities, ETFs, warrants, certificates and bonds) listed on Euronext Cash Markets and, more generally, for other regulated market trades, such as negotiated deals, block trades and volume weighted average price (VWAP) trades.

TCS services are made available during or outside the trading session hours.

Declarations and trades in TCS are made in real time, nonetheless the dissemination via MDG of the declarations made in TCS may be subject to delay (deferral) depending on market rules.

The Trade Confirmation System (TCS) supports the following types of operations:

- Trading outside the central order book, but on exchanges, such as
  - block trades,
  - negotiated deals,
  - VWAP transactions and
  - After hours trades
- Trading on the Euronext Funds Services (EFS) which supports trade declarations in regulated market & specific non-regulated market using matching confirmations.

- Declarations / transactions submitted to TCS may be submitted for clearing through LCH.Clearnet S.A or EuroCCP.

The TCS platform can be accessed by all Euronext European Cash Market clients via an OEG, as well as via a web based application called TCS-Web.

TCS message submission and response are available in the SBE and FIX 5.0 protocols.

This document is an extract of message specifications dedicated to TCS and associated kinematics. This document should be reviewed in conjunction with other related Optiq documentation identified within this document.

Please note, services associated to OTC trade reporting previously supported by TCS are now managed in a different application. For more information please refer to the Euronext's website about APA/ARM services under MiFID II [https://www.euronext.com/trading-services/euronexts-apa-arm-services-under-mifid-ii]

## 1.2 GLOSSARY

This section provides brief description of the key TCS terms used in this document:

- **Declaration:** A declaration is one side of a potential trade (in other words, an order) that is entered by the declaring member in TCS. It awaits matching with the declaration of the counterparty on the opposite side, or, if it fails to match within the given period of time, it is eliminated from TCS.
- **NAV +/-**: net asset value (NAV) adjusted by a surcharge or discount covering the direct costs related to the net in- or -outflow of the fund
- **Fixed cut-off time**: orders entered and pre-matched before the fixed cut-off time (T-1) are executed on the following trading day (T)

- **Additional period**: time in which the fund manager must accept the declarations, so that they can be traded on trading day T
- **Matching time**: the time at which pre-matched trades become matched trades
- **Pre-matched trade**: an order that has been accepted by the fund manager

# 2. TCS SPECIFIC KINEMATICS

This document uses the same notation, concepts and graphic representation as other private message and kinematic specifications created for Optiq. Some introduction to these is provided below, however clients are encouraged to review the associated documents for more information.

## 2.1 MESSAGE CODES AND NAMES

### 2.1.1 Private Messages

Message descriptions and graphical representation of kinematics use the notations as identified below. Please note that these explanations and examples are generic do not necessarily represent exact values used for TCS.

Messages identify Possible Direction of data exchange:

- Inbound - Client ▶OEG (From Client To OEG)
- Outbound - Client ◀OEG (To Client From OEG)

In representation of message behaviour Order Entry Gateway (OEG) message identifiers, which include message codes and names, are provided throughout the message kinematics section as shown below:

- For Inbound messages (example for **NewOrder** message):


01 represents the SBE Bin Code.

[D] represents the FIX Code.

- For Outbound messages (example for **Ack** message):


03 represents the SBE Bin Code.

[8] represents the FIX Code.

### 2.1.2 Public Messages

Possible Direction:

- Outbound - MDG ▶Client (From MDG To Client)

Market Data Gateway message identifiers, which include message codes and names, are provided throughout the message kinematics section as shown below:

For public messages sent to the Market:


### 2.1.3 List of Messages

- Private messages

  Below is the list of SBE and FIX message codes and names used for TCS order entry:

| SBE Bin Message Code | SBE Bin Message Name | FIX Message Code | FIX Message Name |
|---|---|---|---|
| **40** | Declaration Entry | **AE** | TradeCaptureReport |
| **41** | Declaration Entry Ack | **AR** | TradeCaptureReportAck |
| **42** | Declaration Notice | **AR** | TradeCaptureReportAck |
| **43** | Declaration Cancel and Refusal | **AE** | TradeCaptureReport |
| **44** | Fund Price Input | **U44** | FundPriceInput |
| **45** | Fund Price Input Ack | **U45** | FundPriceInputAck |
| **46** | Declaration Entry Rejection | **AR** | TradeCaptureReportAck |
| **100** | Logon | **A** | Logon |
| **101** | Logon Ack | **A** | Logon |
| **102** | Logon Reject | **3** | Reject |
| **103** | Logout | **5** | Logout |
| **106** | Heartbeat | **0** | Heartbeat |
| **107** | TestRequest | **1** | TestRequest |

- Public messages

  The list of message codes and names provided in Public messages used for TCS is provided in the table below:

| Message Code | Message Name |
|---|---|
| **1001** | Market Update |
| **1003** | Price Update |
| **1004** | Full Trade Information |
| **1005** | Market Status Change |

### 2.1.4 Graphical representations

The diagrams in this document represent the following components:

- The overall Optiq® system which is the new integrated trading platform for the Euronext markets, shown as below:


- The Order Entry Gateway which is the private interface between clients and the matching engine:


- The Market Data Gateway (MDG) which sends public messages to the Market:


- The clients' systems, used by the client to send and receive private messages to and from the matching engine, here referred to as Broker:

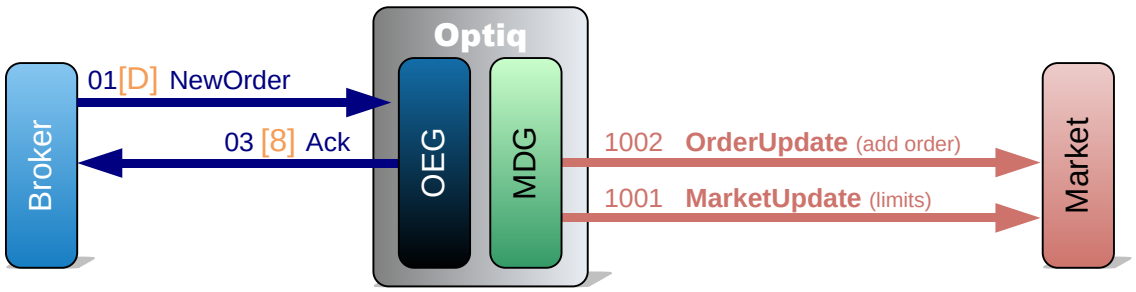

- And the Market represents all the publicly available data sent by the exchange to all subscribers of the public feeds:


### 2.1.5 Main Principles for Graphical Representations of Kinematics

A request sent by a client will usually:

- Trigger an outbound acknowledgment message from the matching engine which is exclusively sent to this client, and in some cases this can be followed by other notification messages;
- Trigger one or several market data messages if the request has a direct impact on public data.

Below is an abbreviated, generic example of the interaction of messages, for the submission of a **NewOrder** (01) message:

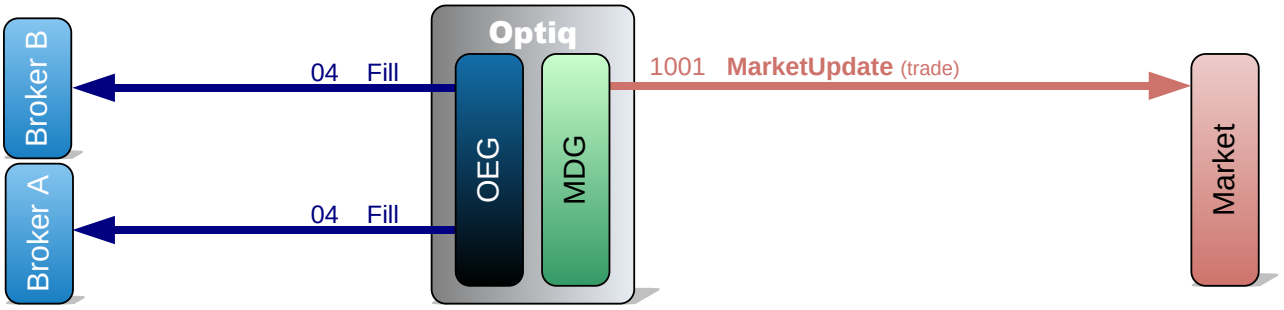



When required diagrams may include division into steps of the scenarios displayed, that are delineated by dotted lines, and are denoted by the number of the step. Numbers denoting the steps in the diagram correspond to the numbers used in the explanation below the diagram.

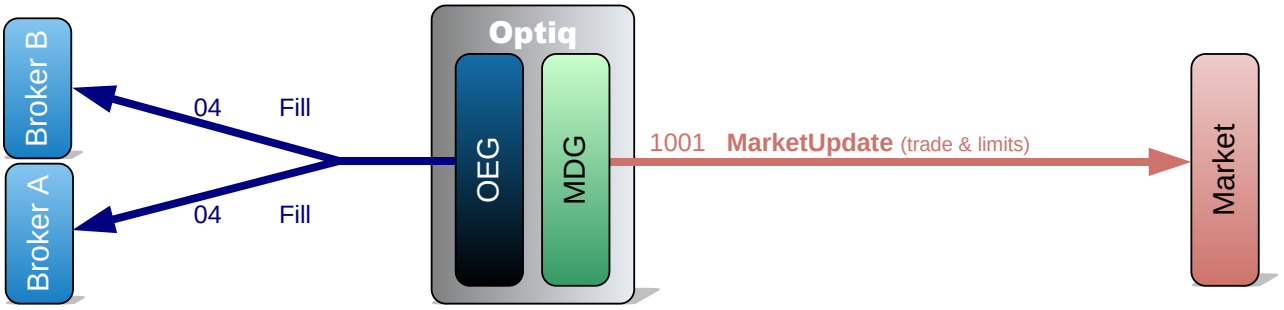
More detailed diagrams may include additional details for the individual messages, such as, Side, Order Priority, Price, Quantity, etc.

### 2.1.6 Simultaneity of Private Messages

In all the diagrams of this document multiple private messages resulting from the same event (eg. **Fill** (04) messages due to a trade execution) are represented as if they were sent one by one:




This is done to reduce complexity of the graphical representation and to improve readability. In reality such messages are sent at the same moment to the different brokers:




For the rest of this document please assume that messages resulting from the same event and sent to different clients are sent at the same moment.

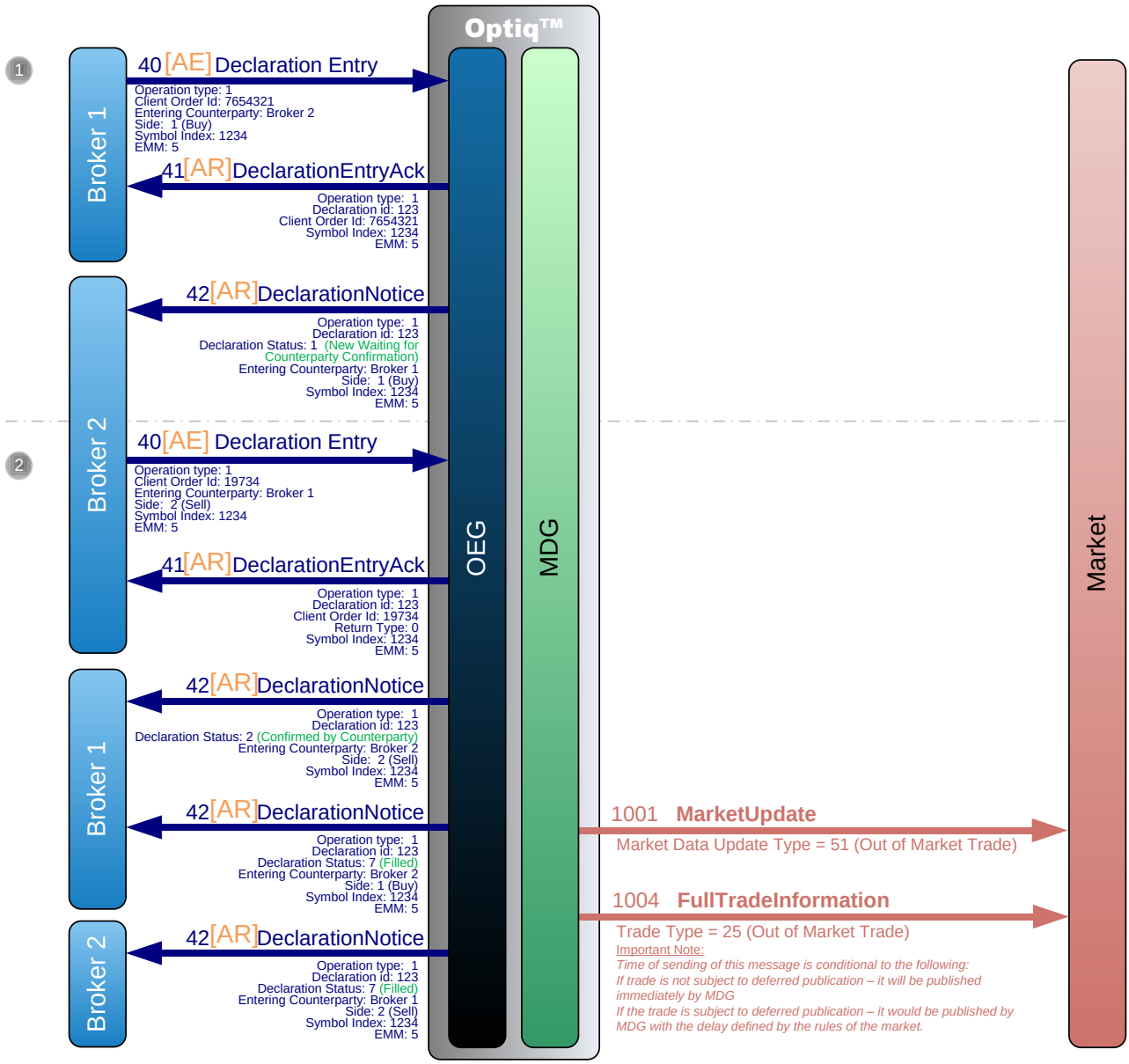
## 2.2 TCS KINEMATICS

TCS Kinematics cover the following set of Operation Types:

- 1 = Declaration of a trade outside the book
- 4 = Fund order (quantity)
- 5 = Declaration of a VWAP transaction
- 6 = Fund order (cash amount)
- 7 = Declaration of a trade on a Secondary listing place

### 2.2.1 Successful Declaration (Buy, Sell, but not Cross)

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 5; and 7) use the same kinematics when applicable.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② Broker 2 sends a private **DeclarationEntry** (40) message to confirm the declaration by entering a new Sell declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The entering declaration immediately matches the first declaration and OEG sends back a private a **DeclarationNotice** (42) to Broker 1 for the confirmation of its counterparty, and two private **DeclarationNotice** (42) messages to each broker for the execution.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the trade.

**Note**: If the characteristics of the Declaration submitted by Broker 1 and the one submitted by Broker 2 match, then the DeclarationEntryAck sent back to the Broker 2 contains the same Declaration ID as the one sent to Broker 1.

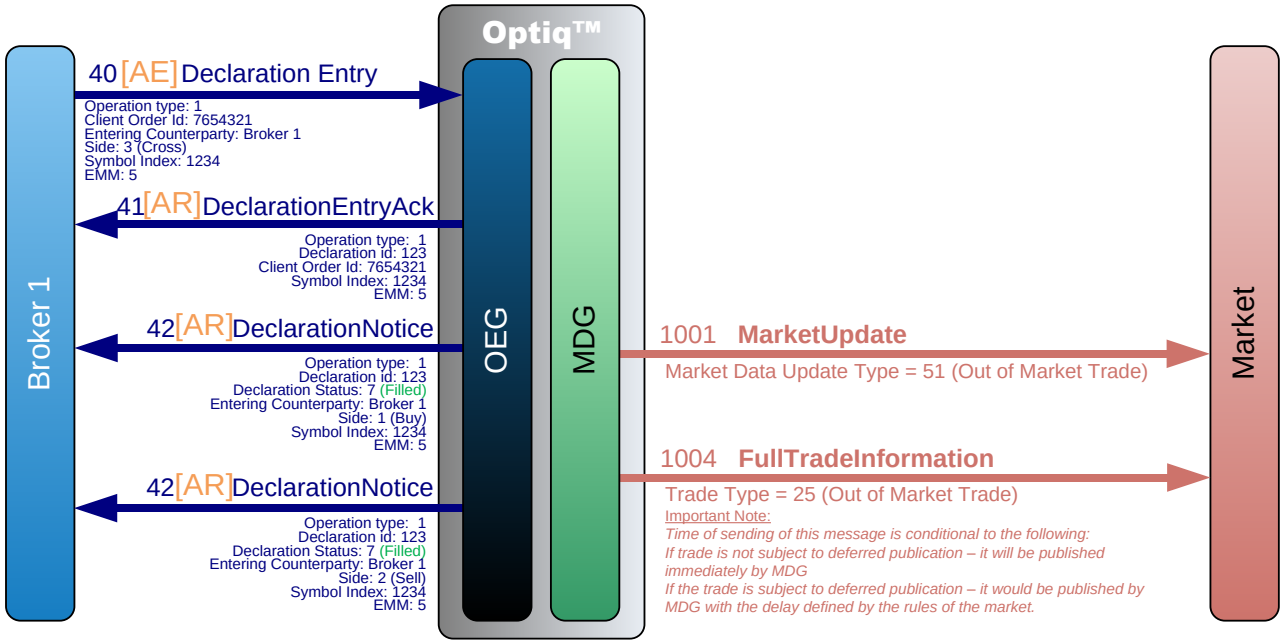
All following DeclarationNotice messages carry the same Declaration ID value.

If the characteristics of the Declarations do not match, then the DeclarationEntryAck sent back to Broker 2 gets a new Declaration ID, and the declaration is entered into the book as another "entering" declaration and remains in the system awaiting other potential matches.

### 2.2.2 Successful Cross Declaration

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 5; and 7) use the same kinematics when applicable.

Important Note: Funds are not eligible to Cross Declaration in TCS.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Cross declaration.

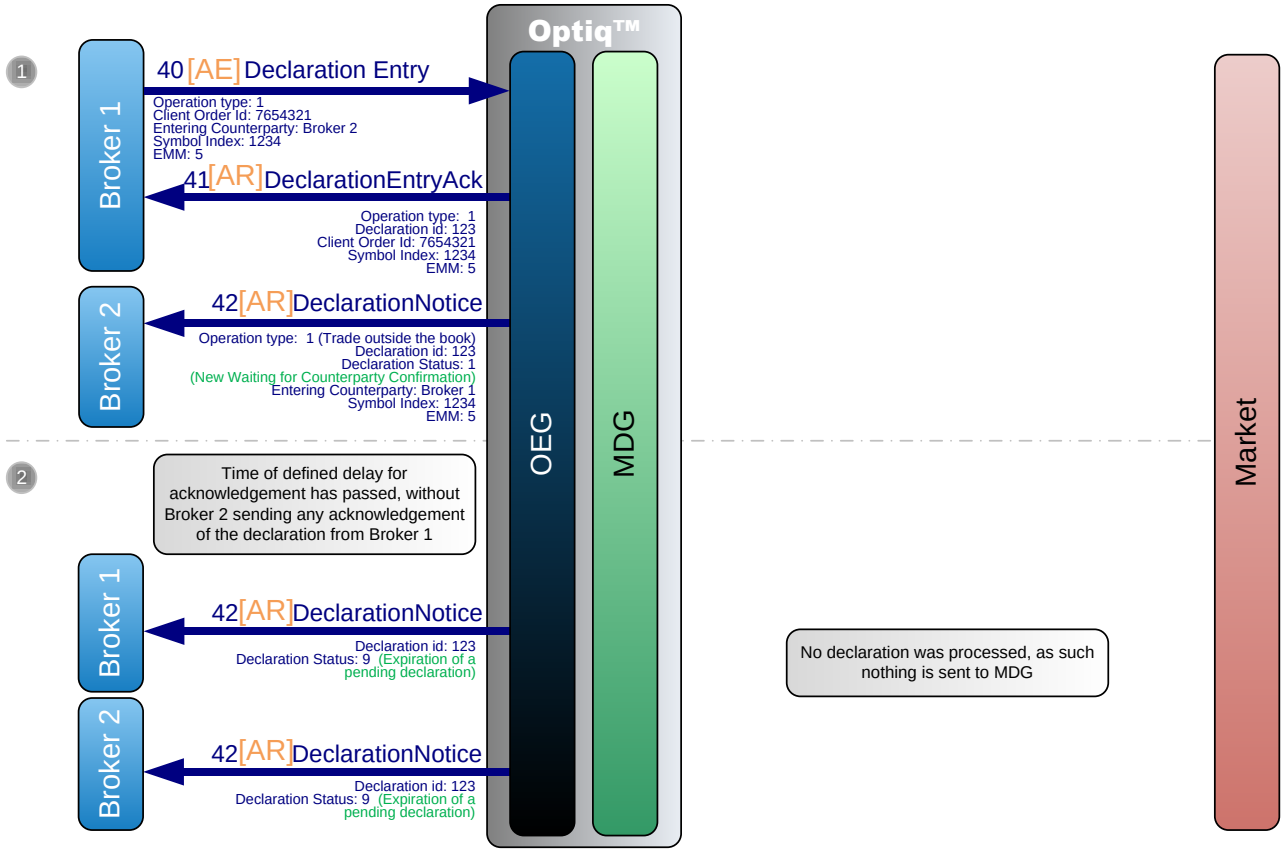
OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

Then OEG sends to Broker 1 two **DeclarationNotice** (42) message with the status “Filled” fore each side of the Cross declaration.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the trade.

### 2.2.3 Successful Declaration with Expiration on Time Basis

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 5; and 7) use the same kinematics when applicable.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

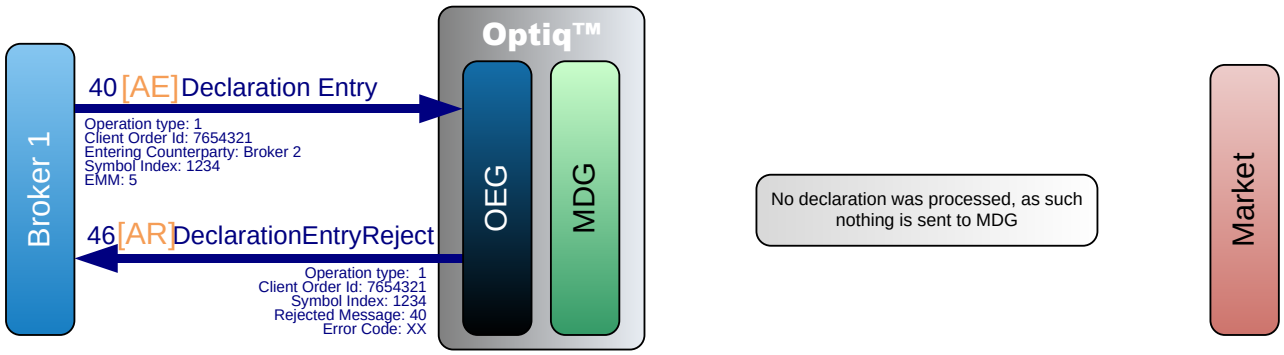
The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status “New, waiting for counterparty Confirmation”.

② After the time of defined delay has passed without a confirmation of the counterparty, the declaration is expired.

OEG sends two private **DeclarationNotice** (42) messages to each broker for the expiration.

### 2.2.4 Declaration Rejected due to a Missing Value

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 4; 5; 6 and 7) use the same kinematics when applicable.

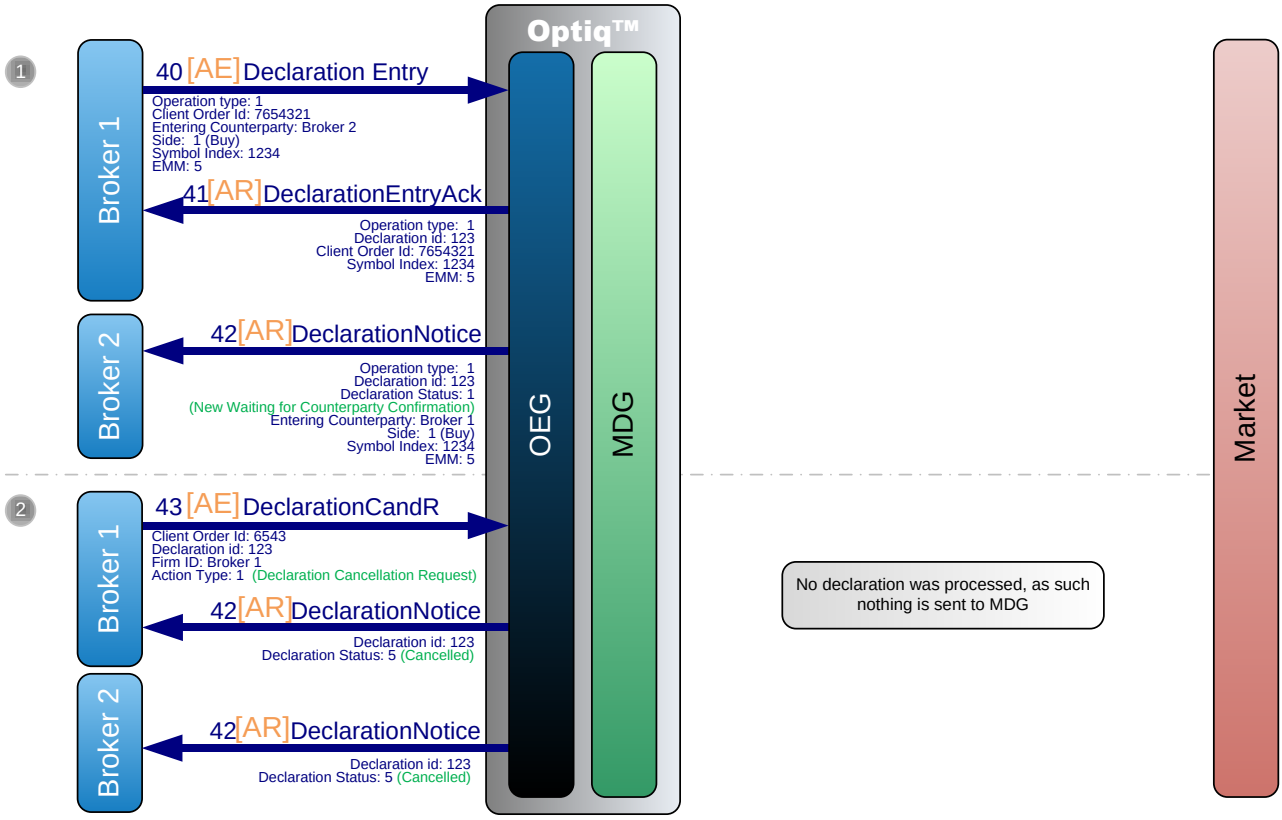



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new declaration.

OEG sends back a private **DeclarationEntryReject** (46) message to reject the declaration as a mandatory value is missing.

### 2.2.5 Cancellation of a Declaration Before Matching (Buy or Sell)

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 5; and 7) use the same kinematics when applicable.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② Broker 1 sends a private **DeclarationCandR** (43) message to request the cancellation of its declaration not yet confirmed by the counterparty.

OEG sends two private **DeclarationNotice** (42) messages to each counterparty for the cancellation of the declaration.

### 2.2.6 Cancellation of a Matched Declaration

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 5; and 7) use the same kinematics when applicable.

① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② Broker 2 sends a private **DeclarationEntry** (40) message to confirm the declaration by entering a new Sell declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The entering declaration immediately matches the first declaration and OEG sends back a private a **DeclarationNotice** (42) to Broker 1 for the confirmation of its counterparty, and two private **DeclarationNotice** (42) messages to each broker for the execution.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the trade.

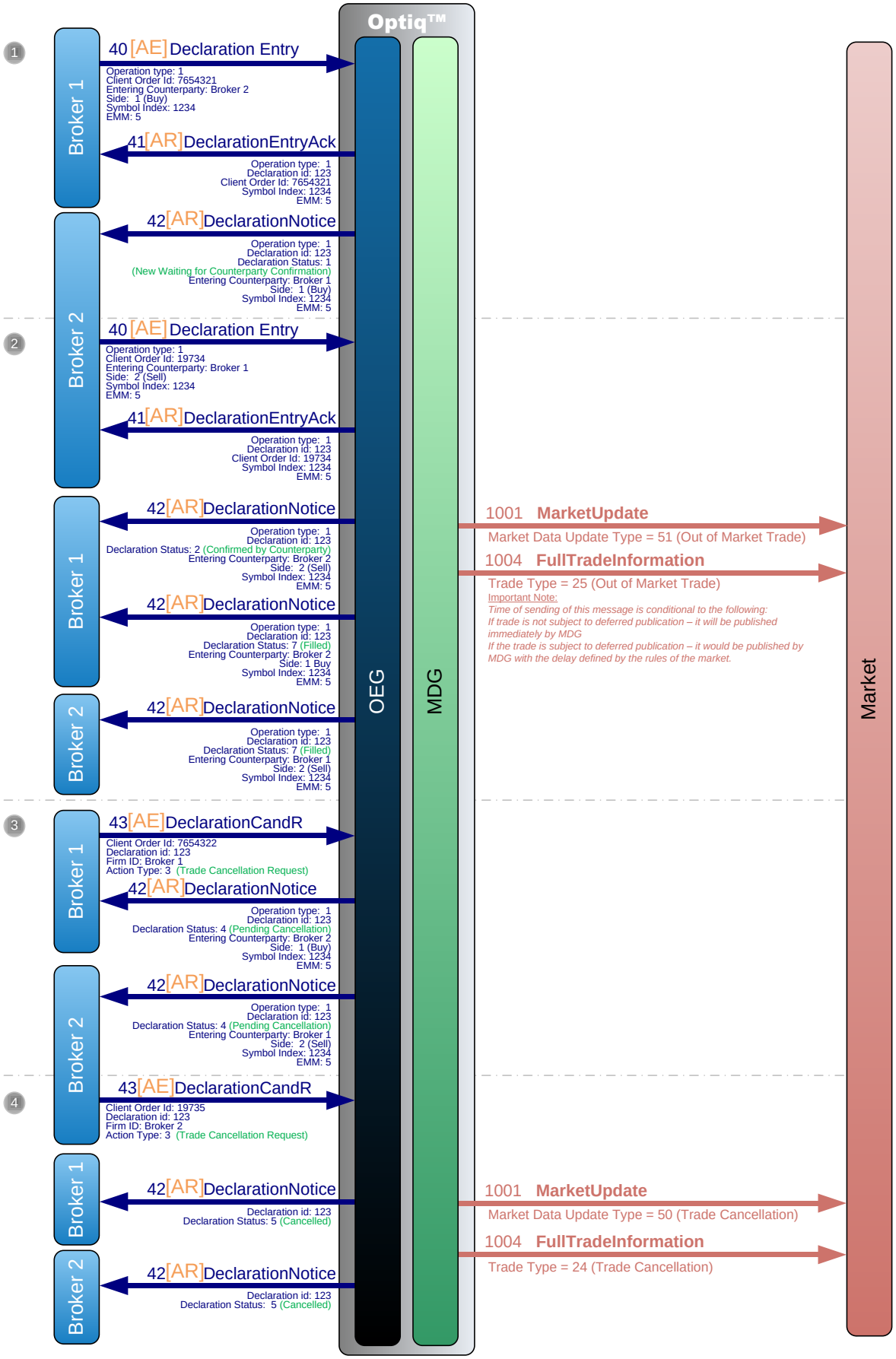
③ Broker 1 sends a private **DeclarationCandR** (43) message to request the declaration cancellation.

OEG sends two private **DeclarationNotice** (42) messages to each broker with the status "Pending Cancellation".

④ Broker 2 sends a private **DeclarationCandR** (43) message to confirm the declaration cancellation.

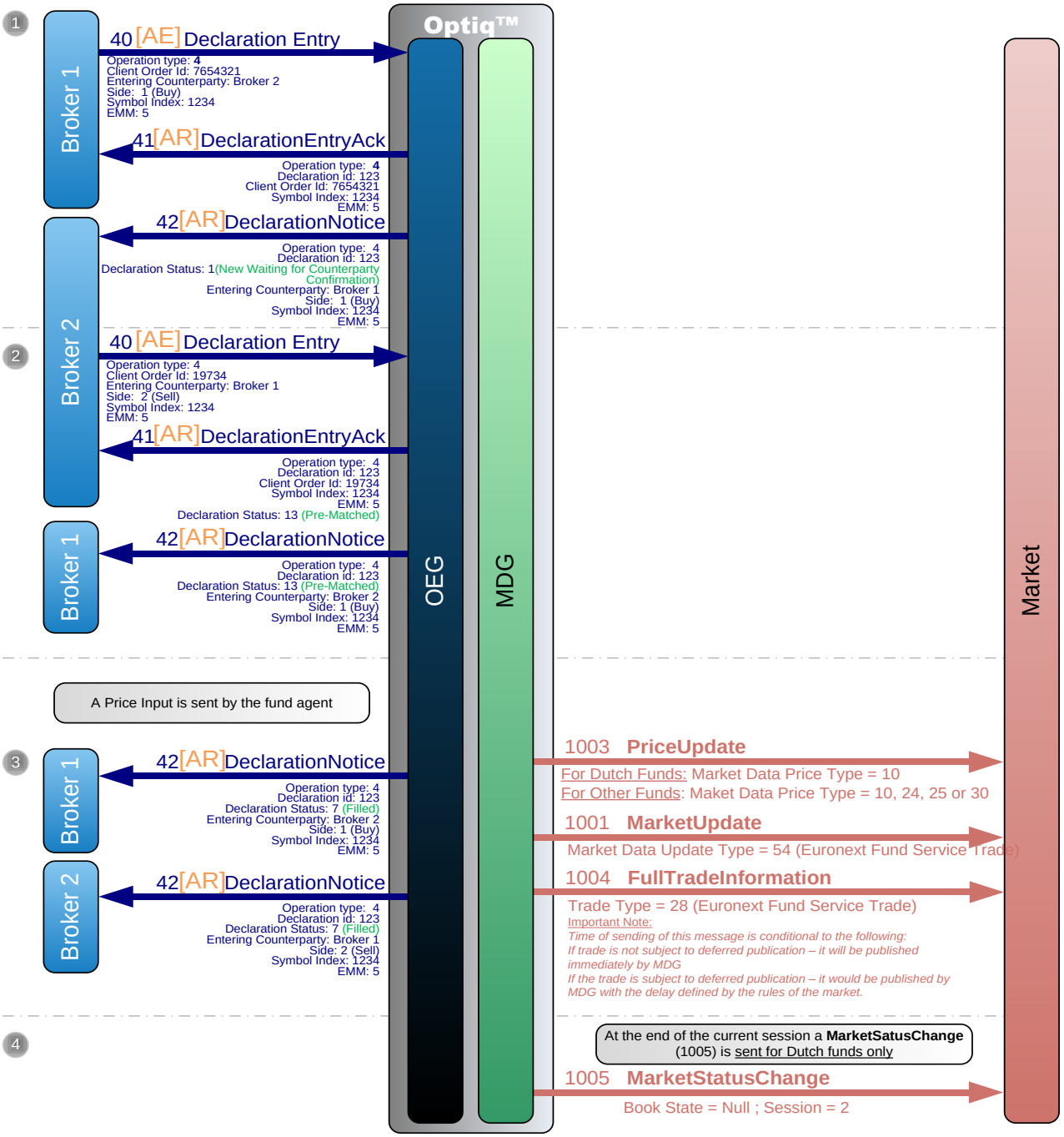
OEG sends two private **DeclarationNotice** (42) messages to each broker for the declaration cancellation.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the cancellation of the trade previously sent.



### 2.2.7 Successful Declaration for the Funds

The kinematics below use the Operation Type set to 4, but any of the operation types supported by TCS for Funds (4 and 6) use the same kinematics when applicable. The example is provided only for Dutch Funds, additional notes are provided for other funds services.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration on a Dutch Fund.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② Broker 2 sends a private **DeclarationEntry** (40) message to confirm the declaration by entering a new Sell declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing and the pre-matching of the request.

OEG sends back a private a **DeclarationNotice** (42) to Broker 1 for the confirmation of its counterpartyand for the Pre-Matching of the declaration.

No public message is generated.

③ After the reception of a price input from the fund agent, on fixing a **PriceUpdate** (1003) message is sent to communicate the price, after this trades are broadcast via a **MarketUpdate** (1001) message followed by a **FullTradeInformation** (1004) message.

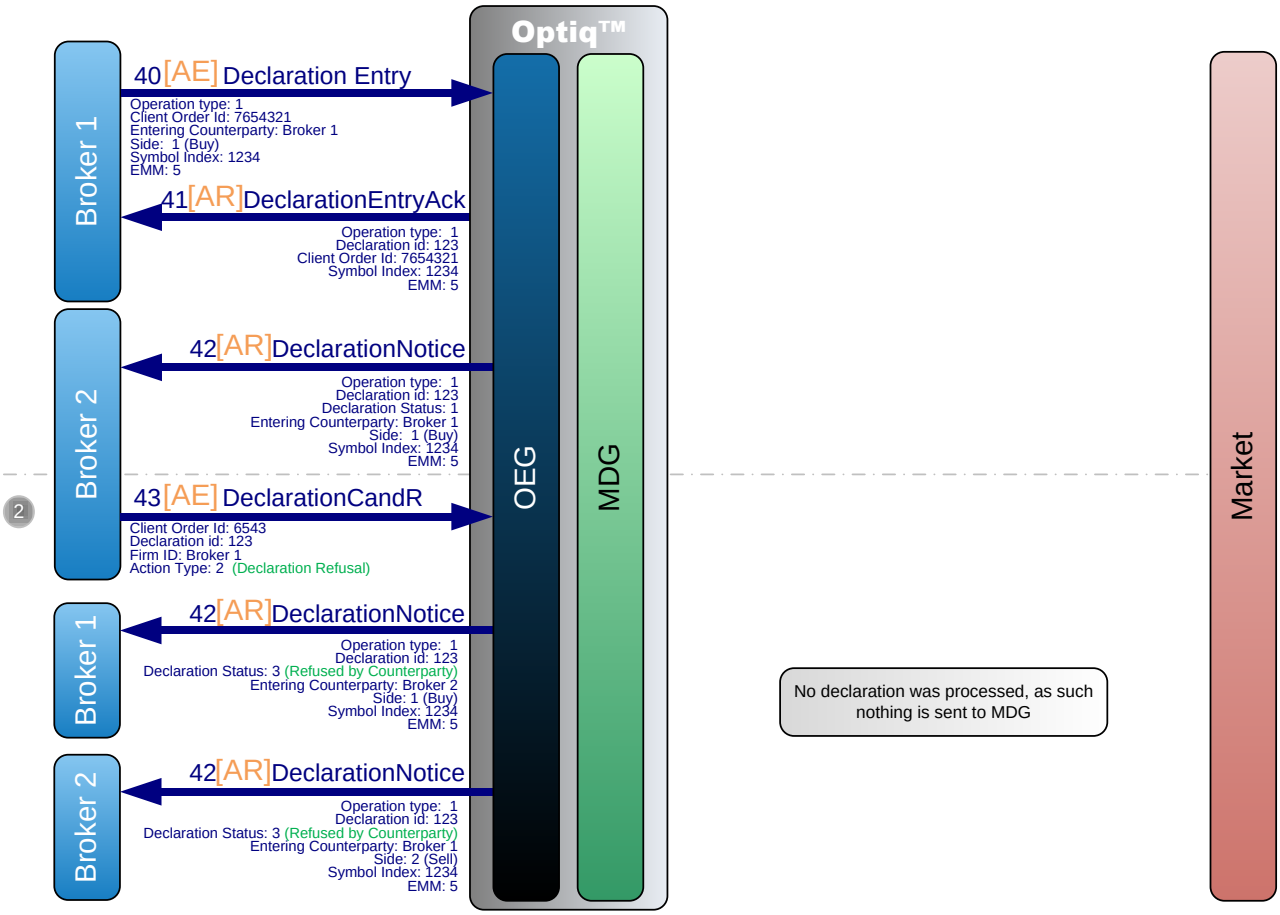
④ At the end of the current session (cut-off) a **MarketStatusChange** (1005) message is sent with Session set to '2'. This is sent for Dutch funds only.

Note: One **PriceUpdate** (1003) message is sent per instrument, which may result in multiple trade messages.

Please note that **MarketStatusChange** (1005) is sent for Dutch Funds only.

### 2.2.8 Refusal of Declaration by Receiving Broker

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 4; 5; 6 and 7) use the same kinematics when applicable.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

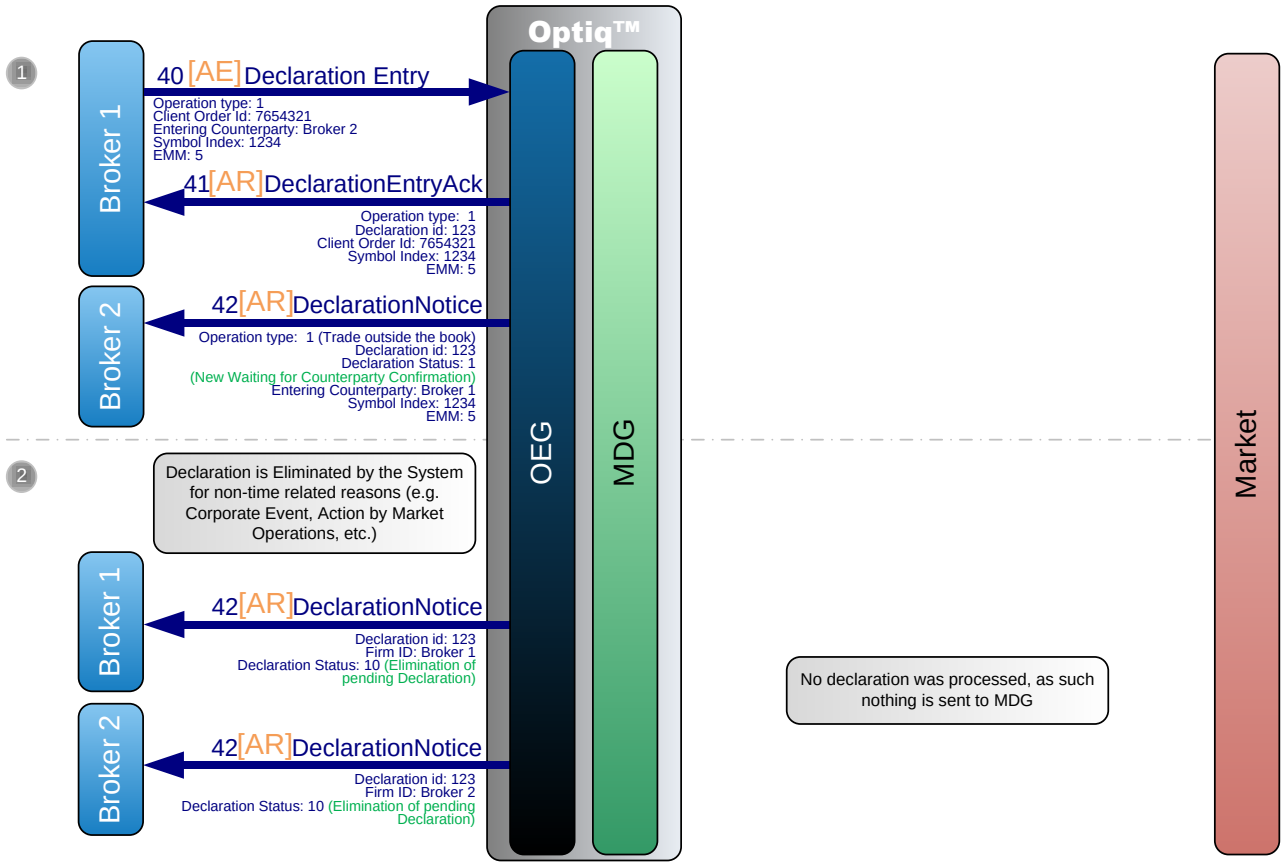
The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② In case Broker 2 is unwilling or for whatever reason unable to confirm the declaration, Broker 2 sends a private **DeclarationCandR** (43) message to refuse the declaration, with Action Type set to "Declaration Refusal".

In this case OEG sends two private **DeclarationNotice** (42) messages to each broker for the refusal of the declaration.

### 2.2.9 Elimination of Declaration by the System

The kinematics below use the Operation Type set to 1, but any of the operation types supported by TCS for declarations (1; 4; 5; 6 and 7) use the same kinematics when applicable.




① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② If before the time of defined delay has not yet passed a non-time related event may occur that would cause elimintation of the declaration. Such an even could be, but is not limited to, occurrence of a Corporate Event, or an action by the Market Operations.

In this case OEG sends two private **DeclarationNotice** (42) messages to each broker for the elimination of the declaration.

# 3. ORDER ENTRY GATEWAY SPECIFICS

## 3.1 SESSION MANAGEMENT & ADMINISTRATIVE MESSAGES

As for exchange of information & instructions with OEGs for other services, clients need to establish connectivity to an OEG for TCS, using the administrative messages described in other Optiq related documentation. The message structure, content and kinematics of administrative messages for TCS is identical to that described in other OEG documentation. For more information clients are urged to review the format specific (SBE or FIX) message document, kinematics Optiq documents and *Euronext Cash Markets - Connectivity Configuration Specifications*.

# 4. SBE INTERFACE

## 4.1 FORMATTING FOR SBE MESSAGES

### 4.1.1 SBE Message Structure

Private inbound and outbound messages are composed of the following parts displayed from left to right in the table below:

| SBE Structure | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Frame | SBE Header | Block | Repeating Section 1 | | | | | ... | Repeating Section N | | | | |
| | | | Repeating Section Header | Rep. Sec. 1.a | Rep. Sec. 1.b | ... | Rep. Sec. 1.n | ... | Repeating Section Header | Rep. Sec. N.a | Rep. Sec. N.a | ... | Rep. Sec. N.a |
| 2 bytes | 8 bytes | n bytes | 2 bytes | $x_1$ bytes | $x_1$ bytes | ... | $x_1$ bytes | ... | 2 bytes | $x_N$ bytes | $x_N$ bytes | ... | $x_N$ bytes |

Each message is enriched with a "Frame" field followed by the SBE header. The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.

**Please note that even if the Frame must be present on the wire for every message, for readability purpose it is not represented in the message structures of this document.**

#### 4.1.1.1 SBE Header

The SBE Header is composed of the following fields:

| Field | Description | Length | Values |
|---|---|---|---|
| Block Length | Length of the block. The Block is the message without the repeating section headers and the repeating sections.<br>This is especially useful of new versions of messages in case Euronext adds fields at the end of the block. Clients will remain able to process the block fields and know where the repeating sections starts. | 2 bytes | From 0 to 2^16-1 |
| Template ID | Identifier of the message template. This is the **message type** of the messages (e.g. NewOrder (01), Ack (03)…). | 2 bytes | From 0 to 2^16-1 |
| Schema ID | Identifier of the message schema that contains the template. | 2 bytes | From 0 to 2^16-1 |
| Schema version | Version of the message schema in which the message is defined. Used to add messages and/or modify some others. | 2 bytes | From 0 to 2^16-1 |

A Schema is the file describing a group of messages (Private inbound and outbound, Market Data, etc.) used by the Exchange. The group of messages is identified by the *Schema ID*. The schema contains the templates that represent the structure of messages supported by the Exchange, each message being identified by its *Template ID* (message type). A given schema may have several *Schema Version* values, which specify the message structure used by the sender.

Hence the file *OEG_SBE_Input_Schema* contains all the Templates for the private inbound and outbound messages. The Schema Version defines the version of this *OEG_SBE_Input_Schema* and the structure to be used by the sender.

**Please note that the SBE Header must be present on the wire for every message, but for readability purpose it is not represented in the message structures of this document.**

#### 4.1.1.2 SBE Repeating Section Header

The SBE Repeating Section Header is composed of the following fields:

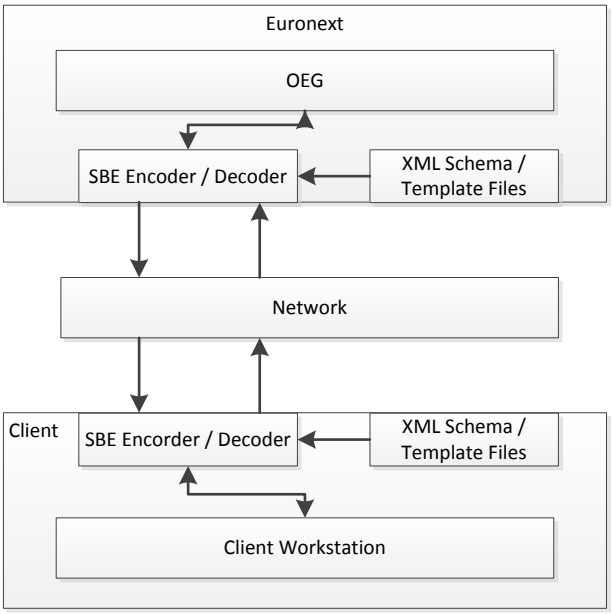
| Field | Description | Length | Values |
|---|---|---|---|
| Block Length | Defines the length in bytes of a repeating section (without the length of the header). | 1 bytes | From 0 to 255 |
| Num In Group | Defines how many times the repeating section is repeated. It is set to "0" if there is no occurrence of this repeating section. | 1 bytes | From 0 to 255 |

This header must be present at the beginning of each repeating section group.

**Please note that the SBE Repeating Section Header must be present on the wire at the beginning of each repeating section block, but for readability purpose it is not represented in the message structures of this document.**

#### 4.1.1.3 SBE Usage

Euronext provides SBE Template XML files that contain all message types supported by the system. Client systems can decode and encode SBE message using the schema and the template files as below:




SBE offers the possibility to have backward and forward compatibility. It means that clients are not required to be on the last version of Schema Version (message structure version) to be able to read the message. This is only possible if changes between versions occurred at the end of:

- The block
- The repeating section.

Using message length, SBE is able to know the difference between the block length or the repeating section length managed by a given client and the received message. As such, fields that do not match a client's version of the messages will be skipped.

However, it is crucial to note that the list of available values in any given field can be updated and the length can be changed. In this case, the update must be taken into account.

*Hence if a field required by the regulator becomes mandatory in a message, each client using this message will need to update its Schema for the latest version, otherwise this message will be rejected by the Order Entry Gateway. A change of length of any field will also lead client to update their Schema if they want to use a message containing this field.*

Please refer to the *Euronext - SBE Technical Note* for further details on the SBE Encoder / Decoder.

#### 4.1.1.4 SBE Optional Fields and Null Value

Optional and conditional fields can be provided as null value, as defined by the SBE standard and further indicated in the SBE XML templates.

Please note that the Null Value means that the field is not applicable, not provided or not used. This is different from the value of zero (0), which may have its own meaning depending on the field.

### 4.1.2 Technical Format Fields

The format of the fields contained in the messages will follow these rules:

- All integers are numeric (signed/ unsigned specified in each field format description) using two's complement method.
- Binary data are in Intel byte order (Little-Endian).
- All "Alphanumerical ID" and "Text" fields are alphanumeric based on UTF-8, left aligned and null padded.
- SBE allows optional fields with a null value. The applicable NULL value is defined by SBE interface.
- Only field values will appear in the published messages (no name or 'tag' will appear in the messages).
- The field names that appear in this document are for reference purposes only.
- All the fields are contiguous.
- All field sizes are fixed and constant.
- Even if it is not always mandatory to be able to process last message version (Schema Version), it is mandatory for clients to check for each update if it contains important or regulation updates.

| Format fields | Description | Null value |
|---|---|---|
| Alphanumerical ID | String type identifying an element, left aligned and completed with null padding (\0). | Each character is a UTF-8 null code point (\0) |
| Amount | Signed or unsigned numerical field representing the price multiplied by the quantity.<br>See the description in Price, Quantity, Ratio And Amount Formats. | Null value defined in SBE Template |

| Format fields | Description | Null value |
|---|---|---|
| Bitmap | Array of bits, each bit specifying whether an optional value is present (set to "1") or not (set to "0") (in Little-Endian).<br>E.g. For the Trade Qualifier bitmap field if its bit in position zero (0) is set to one (1) then it defines the trade as an Uncrossing Trade. In the same time bit in position one (1) can also be set to one (1) which will in this case indicates that this is also an Opening Trade. | No null value |
| Boolean | This field acts as an enumerated field with the possible values 0 (false), 1 (true) or null value. | Null value defined in SBE Template |
| Date | Date of an event (in number of days since 01/01/1970 UTC - 01/01/1970 is the day "0"). | Null value defined in SBE Template |
| Enumerated | Information having a delimited set of possible values. | Null value defined in SBE Template<br>Note: The null value here depends on the technical type which can be unsigned integer or character. |
| Epoch Time in Nanoseconds | UTC Timestamp indicating the number of nanoseconds since epoch (January the 1st 1970). | Null value defined in SBE Template |
| Integer Time in hhmmss | UTC Timestamp using an integer to define the time as hhmmss. | Null value defined in SBE Template |
| Intraday Time in Seconds | UTC Timestamp indicating the number of seconds since the beginning of the day. | Null value defined in SBE Template |
| Numerical | Generic numerical field on unsigned integer. | Null value defined in SBE Template |
| Numerical ID | Numerical field identifying an element. | Null value defined in SBE Template |
| Price | Signed numerical field representing a price.<br>See the description in Price, Quantity, Ratio And Amount Formats. | Null value defined in SBE Template |
| Quantity | Unsigned numerical field representing a quantity of elements (for example a number of shares).<br>See the description in Price, Quantity, Ratio And Amount Formats. | Null value defined in SBE Template |
| Sequence | See the description in Sequence Numbers | Null value defined in SBE Template |
| Text | Text in UTF-8, left aligned and completed with null padding (\0). | Each character is a UTF-8 null code point (\0) |

### 4.1.3 Date and Time Conventions

Date and Time provided in this document refer to the following names, and are provided in the following format:

- Timestamps are expressed in UTC (Universal Time, Coordinated) and are synchronised using Precision Time Protocol (PTP). Their format is defined in number of nanoseconds since 01/01/1970 UTC, and is populated as 8-byte unsigned integers.

- Dates and Times formatted for ESMA reporting (MiFID II) are defined with a 27-byte character string following ISO 8601:

| YYYY-MM-DDThh:mm:ss.ddddddZ. |
|---|

where:

  - "YYYY" is the year.
  - "MM" is the month.
  - "DD" is the day.
  - "T" is a constant letter used as a separator between "YYYY-MM-DD" and "hh:mm:ss.ddddddZ".
  - "hh" is the hour.
  - "mm" is the minute.
  - "ss.dddddd" is the second and its fraction of a second.
  - "Z" is a constant letter used for UTC time.

### 4.1.4 Sequence Numbers

The Order Entry Gateway manages two sequence numbers:

- Message Sequence Number: this sequence number is incremented one by one by the OEG and per OE Session (physical connection). It is provided in every application outbound message.
- Client Message Sequence Number: this sequence number must be managed by the client's workstation and is mandatory for each application inbound message. It is recommended to increment this number one by one per OE Session (physical connection). Please note that this sequence is not checked by the OEG but will be useful for some specific recovery cases.

### 4.1.5 Price, Quantity, Ratio and Amount Formats

If a price is needed in the messages, it is expressed in currency or in percentages (generally for bonds).

The volume of the order is a number of Securities or an amount expressed in currency.

All prices are processed using two values:

  - the price value (Signed/Unsigned Integer);
  - the scale code (*Price/Index Level Decimals*).

Clients have to link each instrument to the associated "*Price/Index Level Decimals*" from the Standing Data message or file.

The prices must be calculated according to the following formula:

$$\text{Price} = \frac{Integer}{10^{\text{"Price/Index Level Decimals"}}}$$

For example, a price of 27.56 is sent in messages in the Price field as an Integer of 275600, if the "*Price / Index Level Decimals*" from the Standing Data is equal to 4.

- The same mechanism is used for:
  - All quantities with "*Quantity Decimals*"
  - All ratios and percentages with "*Ratio / Multiplier Decimals*"
  - All amounts with "*Amount Decimals*"

### 4.1.6 Instrument Identifiers and EMM

#### 4.1.6.1 Symbol Index

An instrument is identified by its Symbol Index.

The standard security identifier (for example ISIN), mnemonic, tick size, instrument name and other instrument characteristics are carried only in the following Market Data message **StandingData** (1007) and in the Standing Data files available on the EFS server. As such, the client applications must link the Symbol Index which is used in all messages, with other instrument characteristics present in the **StandingData** (1007) message or file.

The Symbol Index is assigned by Euronext and will not change over the lifetime of the instrument.

In some extraordinary cases an instrument can move from an Optiq segment to another one keeping its Symbol Index. Clients will always be notified in advance before such changes.

Any Corporate Action leading to a change of ISIN will lead to change of SymbolIndex. These Corporate Actions are generally part of the mandatory reorganisation events; the most frequent ones being stock split, reverse stock split, change of name / denomination. However the ISIN change is not systematic and will be in any case communicated upfront through the Euronext Corporate Action notices.

**For further details on the Standing Data messages and files please refer to the *Euronext Cash and Derivatives Markets – Optiq MDG Client Specifications.***

#### 4.1.6.2 EMM

The *Exchange Market Mechanism* represents the platform to which the order sent by the client must be routed. It must be specified by clients each time a *Symbol Index* is specified as it is used to route the order to the right platform.

For day 1 implementation of TCS in Optiq, following migration to full trading chain of Euronext Cash markets, EMM will be set to value ‘5’. In the future delivery EMM for Fund services will be added for clearer identification of the service.

## 4.2 SBE MESSAGES

### 4.2.1 Important Notes

#### 4.2.1.1 Conditional Values in Outbound Messages

Please note that for the outbound messages (Client◀OEG) the "presence" of the fields in the block of the message is often set to "Conditional", which means that those fields might be populated with Null Value, when not required. As a single outbound message may cover several trading cases, it contains fields needed in all of these cases, which may be populated or not.

### 4.2.2 Messages Formatting

#### 4.2.2.1 Introduction to Message Representation

To help reading the message structure in this document the following introductory explanation is provided.

- In all the structures of messages of this document (the tables representing the messages only):
  - All the lengths identified are in bytes.
  - Short descriptions of individual fields within the structures might not be exhaustive, please refer to Section 6 Field Description where further details are provided for each individual field.
  - Where a list of specific allowed values is provided, if client provides data that is outside of this range of values, the message will be rejected
  - In the fields description the following pictograms represent:
    - [C] means that the value is for Cash only;
    - [D] means that the value is for Derivatives only;
    - [i] means that special conditions apply to the displayed value. These conditions are detailed in the "conditions" in the description of the corresponding field.
  - The display of message sections is formatted as described below:
    - **Block section**: The block is for all the non-repeated fields. They must be present on the wire for each message, even if they are optional or conditional. The length of the section is defined in each individual message template (in bytes).

| | | | | | | |
|---|---|---|---|---|---|---|
| Firm ID | Firm ID. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 100 |
| Message Sending Time | Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC) | Timestamp | 8 | From 0 to 2^64-2 | Mandatory | 107 |
| Client Order ID | Client order ID. | Numerical ID | 8 | From -2^63-1 to 2^63-1 | Mandatory | 90 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 120 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Mandatory | 97 |

### 4.2.3 Administration Messages

As identified elsewhere in this document, the connectivity to the OEG for TCS service uses the same administrative messages described in other Optiq related documentation. The message structure, content and kinematics of administrative messages for TCS are identical to those described for the OEG SBE and FIX

formats. For more information clients are urged to review the format specific (SBE or FIX) message specifications documents.

### 4.2.4 Application Messages

#### 4.2.4.1 Declaration Entry (40)

Client ▶OEG
Available for: TCS
**Message Usage:**

The **Declaration Entry** (40) message is used for the sending of a TCS Declaration.

For Cross orders two instances of fields listed below are provided, to identify the information for each side of the cross order. The description of each field identifies whether the field is to be used for identification of the buy or sell side, but as a general rule fields containing "Cross" in the name, are used for provision of the information for the sell side: *Account Number*, *Account Number Cross*, *Account Type*, *Account Type Cross*, *Free Text*, *Free Text Cross*, *Principal Code*, *Principal Code Cross*, *Trading Capacity*, *Trading Capacity Cross*.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Client Message Sequence Number | The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange. | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 45 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Message Sending Time | Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC) | Timestamp | 8 | From 0 to 2^64-2 | Mandatory | 52 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |
| Operation Type | Type of Operation. | Enumerated | 1 | (See field description) | Mandatory | 53 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Mandatory | 47 |
| Entering Counterparty | Identifies the counterpart of the transaction. | Alphanumerical ID | 8 | (See field description) | Optional | 48 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Side | Indicates the Executing Side. | Enumerated | 1 | 1 = Buy<br>2 = Sell<br>3 = Cross | Mandatory | 57 |
| Quantity | Number of traded or ordered units (to be calculated with Quantity Decimals). | Quantity | 8 | From 0 to 2^64-2 | Conditional | 56 |
| Price | Price per unit of quantity (to be calculated with the Price/Index Level Decimals). | Price | 8 | From -2^63+1 to 2^63-1 | Conditional | 55 |
| ExecutionWithinFirm ShortCode | MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making. | Numerical ID | 4 | From -2^31+1 to 2^31-1 | Mandatory | 49 |
| ClientIdentificationS hortCode | MiFID II short code, Client identification code. | Numerical ID | 4 | From -2^31+1 to 2^31-1 | Conditional | 46 |
| MIC of Secondary Listing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383. | Alphanumerica l ID | 4 | (See field description) | Conditional | 52 |
| Centralisation Date | Centralisation Date. | Alphanumerica l ID | 10 | (See field description) | Optional | 44 |
| Clearing Firm ID | Clearing firm ID. | Alphanumerica l ID | 8 | (See field description) | Optional | 44 |
| Account Type | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. | Enumerated | 1 | (See field description) | Mandatory | 42 |
| Account Type Cross | Indicates the account type for which the sell side of a cross order is entered. | Enumerated | 1 | (See field description) | Conditional | 43 |
| Trading Capacity | Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. | Enumerated | 1 | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) | Mandatory | 58 |
| Trading Capacity Cross | Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity. | Enumerated | 1 | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) | Conditional | 59 |
| Settlement Period | Indicates the settlement delay in trading days, from 0 to 30 days. | Numerical | 1 | From 0 to 30 | Mandatory | 57 |
| Settlement Flag | Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled") | Boolean | 1 | 0 = False<br>1 = True | Mandatory | 56 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Guarantee Flag | Indicates if the trade is guaranteed or not (for clearing purposes). | Enumerated | 1 | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed | Mandatory | 51 |
| MiFID Indicators | Field used as instruction for order handling. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. | Bitmap | 1 | (See field description) | Mandatory | 53 |
| Transaction Price Type | Contribution to price formation or the price discovery process. | Enumerated | 1 | 1 = Plain Vanilla Trade<br>2 = Non Price Forming Trade (NPFT)<br>3 = Trade Not Contributing to Price Discovery Process<br>4 = Dark Trade (For Future Use) | Optional | 59 |
| Principal Code | Identifies the beneficiary of the transaction when trading on behalf of another establishment. | Alphanumerical ID | 8 | (See field description) | Optional | 55 |
| Principal Code Cross | Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order. | Alphanumerical ID | 8 | (See field description) | Optional | 55 |
| Start Time Vwap | Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). | Intraday Time in Seconds | 4 | From 0 to 2^32-2 | Conditional | 57 |
| End Time Vwap | End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). | Intraday Time in Seconds | 4 | From 0 to 2^32-2 | Conditional | 48 |
| Gross Trade Amount | Total amount of a Declaration. | Amount | 8 | From -2^63+1 to 2^63-1 | Conditional | 50 |
| Account Number | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate. | Alphanumerical ID | 12 | (See field description) | Optional | 42 |
| Account Number Cross | Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate. | Alphanumerical ID | 12 | (See field description) | Optional | 42 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Free Text | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. | Text | 18 | (See field description) | Optional | 50 |
| Free Text Cross | Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate. | Text | 18 | (See field description) | Optional | 50 |
| InvestmentDecisionWFirmShortCode | MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision. | Numerical ID | 4 | From -2^31 to 2^31-1 | Conditional | 51 |
| ClientIdentificationShortCodeCross | MiFID II short code, Client identification code. | Numerical ID | 4 | From -2^31+1 to 2^31-1 | Conditional | 46 |

#### 4.2.4.2 Declaration Entry Ack (41)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **DeclarationEntryAck** (41) message is sent in response to the **DeclarationEntry** (40) message. This message informs clients of the acknowledgement of positive status of their submission.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Message Sequence Number | Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange) | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 52 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Declaration ID | Numerical declaration identifier assigned by the Exchange. | Numerical ID | 8 | From 0 to 2^64-2 | Conditional | 46 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Conditional | 47 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| MIC of Secondary Listing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383. | Alphanumerical ID | 4 | (See field description) | Conditional | 52 |
| Operation Type | Type of Operation. | Enumerated | 1 | (See field description) | Mandatory | 53 |
| Pre Matching Type | Pre-matching delay indicator for a TCS Declaration. | Enumerated | 1 | (See field description) | Conditional | 54 |
| Waiver Indicator | Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. | Bitmap | 1 | (See field description) | Conditional | 59 |

#### 4.2.4.3 Declaration Notice (42)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **DeclarationNotice** (42) message is sent to provide the status of a previously submitted declaration to counterparties.

The message is sent as:

- Declaration notification to the counterparty;
- Declaration refusal notice;
- Pre-match Notice;
- Matching Notice;
- Expiration Notice;
- Trade Cancellation Notice.

Please note that the following fields are provided only in case the notice is issued for a Fill or a Pre-Match (*Declaration Status* = '7' or '13') and only to the concerned member if the corresponding necessary values were submitted in the original declaration: *Trade Time*, *Clearing Firm ID*, *Account Type*, *Account Type Cross, Trading Capacity*, *Trading Capacity Cross*, *Principal Code*, *Principal Code Cross*, *Account Number*, *Account Number Cross*, *Free Text*, *Free Text Cross*, *Waiver Indicator*.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Message Sequence Number | Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange) | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 52 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Conditional | 45 |
| Declaration ID | Numerical declaration identifier assigned by the Exchange. | Numerical ID | 8 | From 0 to 2^64-2 | Mandatory | 46 |
| Declaration Status | Provides status of the Declaration. | Enumerated | 1 | (See field description) | Mandatory | 47 |
| Operation Type | Type of Operation. | Enumerated | 1 | (See field description) | Mandatory | 53 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Mandatory | 47 |
| Entering Counterparty | Identifies the counterpart of the transaction. | Alphanumerical ID | 8 | (See field description) | Conditional | 48 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Side | Indicates the Executing Side. | Enumerated | 1 | 1 = Buy<br>2 = Sell<br>3 = Cross | Conditional | 57 |
| Quantity | Number of traded or ordered units (to be calculated with Quantity Decimals). | Quantity | 8 | From 0 to 2^64-2 | Conditional | 56 |
| Price | Price per unit of quantity (to be calculated with the Price/Index Level Decimals). | Price | 8 | From -2^63+1 to 2^63-1 | Conditional | 55 |
| Pre Matching Type | Pre-matching delay indicator for a TCS Declaration. | Enumerated | 1 | (See field description) | Conditional | 54 |
| Trade Time | Time of the trade. | Timestamp | 8 | From 0 to 2^64-2 | Conditional | 58 |
| MIC of Secondary Listing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383. | Alphanumerical ID | 4 | (See field description) | Conditional | 52 |
| Centralisation Date | Centralisation Date. | Alphanumerical ID | 10 | (See field description) | Optional | 44 |
| Clearing Firm ID | Clearing firm ID. | Alphanumerical ID | 8 | (See field description) | Conditional | 44 |
| Account Type | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. | Enumerated | 1 | (See field description) | Conditional | 42 |
| Account Type Cross | Indicates the account type for which the sell side of a cross order is entered. | Enumerated | 1 | (See field description) | Conditional | 43 |
| Trading Capacity | Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. | Enumerated | 1 | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) | Conditional | 58 |
| Trading Capacity Cross | Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity. | Enumerated | 1 | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) | Conditional | 59 |
| Settlement Flag | Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled") | Boolean | 1 | 0 = False<br>1 = True | Conditional | 56 |
| Settlement Period | Indicates the settlement delay in trading days, from 0 to 30 days. | Numerical | 1 | From 0 to 30 | Conditional | 57 |
| Guarantee Flag | Indicates if the trade is guaranteed or not (for clearing purposes). | Enumerated | 1 | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed | Conditional | 51 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Transaction Price Type | Contribution to price formation or the price discovery process. | Enumerated | 1 | 1 = Plain Vanilla Trade<br>2 = Non Price Forming Trade (NPFT)<br>3 = Trade Not Contributing to Price Discovery Process<br>4 = Dark Trade (For Future Use) | Conditional | 59 |
| Principal Code | Identifies the beneficiary of the transaction when trading on behalf of another establishment. | Alphanumerical ID | 8 | (See field description) | Conditional | 55 |
| Principal Code Cross | Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order. | Alphanumerical ID | 8 | (See field description) | Conditional | 55 |
| Start Time Vwap | Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). | Intraday Time in Seconds | 4 | From 0 to 2^32-2 | Conditional | 57 |
| End Time Vwap | End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). | Intraday Time in Seconds | 4 | From 0 to 2^32-2 | Conditional | 48 |
| Gross Trade Amount | Total amount of a Declaration. | Amount | 8 | From -2^63+1 to 2^63-1 | Conditional | 50 |
| Account Number | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate. | Alphanumerical ID | 12 | (See field description) | Conditional | 42 |
| Account Number Cross | Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate. | Alphanumerical ID | 12 | (See field description) | Conditional | 42 |
| Free Text | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. | Text | 18 | (See field description) | Conditional | 50 |
| Free Text Cross | Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate. | Text | 18 | (See field description) | Conditional | 50 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Waiver Indicator | Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. | Bitmap | 1 | (See field description) | Conditional | 59 |
| Previous Day Indicator | Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1") | Boolean | 1 | 0 = False<br>1 = True | Conditional | 54 |
| Miscellaneous Fee Amount | Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order. | Amount | 8 | From -2^63+1 to 2^63-1 | Conditional | 53 |
| CCP ID | ID of the clearing house in case of a CCP clearable transaction | Enumerated | 1 | (See field description) | Conditional | 44 |

#### 4.2.4.4 Declaration Cancel and Refusal (43)

Client ▶OEG
Available for: TCS
**Message Usage:**

The **DeclarationCancelandRefusal** (43) message is used to request cancellation of a previously matched declaration, or to refuse a declaration upon declaration notification submitted by the counterparty.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Client Message Sequence Number | The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange. | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 45 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Message Sending Time | Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC) | Timestamp | 8 | From 0 to 2^64-2 | Mandatory | 52 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Declaration ID | Numerical declaration identifier assigned by the Exchange. | Numerical ID | 8 | From 0 to 2^64-2 | Mandatory | 46 |
| Action Type | Provides the request to be performed on an existing declaration, which is identified by its Declaration ID. | Enumerated | 1 | 1 = Declaration Cancellation Request<br>2 = Declaration Refusal<br>3 = Trade Cancellation Request | Mandatory | 43 |

#### 4.2.4.5 Fund Price Input (44)

Client ▶OEG
Available for: TCS
**Message Usage:**

The **FundPriceInput** (44) message is used by the Dutch Fund Manager to send a price to TCS matching engine used for Fixing and in order to match declaration, when *Operation Type* = '4' or '6'.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Client Message Sequence Number | The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange. | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 45 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Message Sending Time | Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC) | Timestamp | 8 | From 0 to 2^64-2 | Mandatory | 52 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Mandatory | 47 |
| Price | Price per unit of quantity (to be calculated with the Price/Index Level Decimals). | Price | 8 | From -2^63+1 to 2^63-1 | Mandatory | 55 |

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Bypass Indicator | Control indicator of the price and quantity. Indicates whether it should bypass the price and quantity controls or not. (0: [indicated as False] means "Control" ; 1:[indicated as True] means "No Control") | Boolean | 1 | 0 = False<br>1 = True | Conditional | 43 |

#### 4.2.4.6 Fund Price Input Ack (45)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **FundPriceInputAck** (45) message is sent to provide the positive acknowledgement of a previously submitted **FundPriceInput** (44) message.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Message Sequence Number | Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange) | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 52 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Mandatory | 47 |
| Price | Price per unit of quantity (to be calculated with the Price/Index Level Decimals). | Price | 8 | From -2^63+1 to 2^63-1 | Mandatory | 55 |
| Bypass Indicator | Control indicator of the price and quantity. Indicates whether it should bypass the price and quantity controls or not. (0: [indicated as False] means "Control" ; 1:[indicated as True] means "No Control") | Boolean | 1 | 0 = False<br>1 = True | Conditional | 43 |

#### 4.2.4.7 Declaration Entry Reject (46)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **DeclarationEntryReject** (46) message is sent in response to the **DeclarationEntry** (40), **DeclarationCancelandRefusal** (43) and **FundPriceInput** (44) messages. This message informs clients if the status of their submission is negative. If message was rejected due to inconsistency of data / presence of multiple fields or conditions checked, the field *Error Code* will indicate only the first instance of inconsistency encountered in the inbound message.

| Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|
| Message Sequence Number | Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange) | Sequence | 4 | From 0 to 2^32-2 | Mandatory | 52 |
| Firm ID | Identifier of the member firm that sends the message. | Alphanumerical ID | 8 | (See field description) | Mandatory | 49 |
| Client Order ID | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. | Numerical ID | 8 | From -2^63+1 to 2^63-1 | Mandatory | 45 |
| Symbol Index | Exchange identification code of the instrument. | Numerical ID | 4 | From 0 to 2^32-2 | Mandatory | 57 |
| EMM | Defines the Exchange Market Mechanism applied on each platform. | Enumerated | 1 | (See field description) | Conditional | 47 |
| MIC of Secondary Listing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383. | Alphanumerical ID | 4 | (See field description) | Conditional | 52 |
| Operation Type | Type of Operation. | Enumerated | 1 | (See field description) | Mandatory | 53 |
| Error Code | Error code in case of rejection. | Numerical ID | 2 | From 0 to 2^16-2 | Mandatory | 48 |
| Rejected Message | Provides the ID (Template ID) of the rejected message. | Numerical ID | 1 | From 0 to 2^8-2 | Mandatory | 56 |

## 4.3 FIELD DESCRIPTION FOR SBE MESSAGES

## Account Number

| | |
|---|---|
| Field Name | Account Number |
| Description | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate. |
| Used For | Cash and Derivatives |
| Format | Alphanumerical ID |
| Length | 12 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Account Number Cross

| | |
|---|---|
| Field Name | Account Number Cross |
| Description | Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate. |
| Used For | Cash and Derivatives |
| Format | Alphanumerical ID |
| Length | 12 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Account Type

| | |
|---|---|
| Field Name | Account Type |
| Description | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.<br>For Cross orders it specifies the account type for which the buy side of a cross order is entered.<br>- Non-LP clients are not allowed to use the type '6' (Liquidity Provider).<br>- Only members acting as Retail Member Organizations (RMO) can send '3' (RO) orders on behalf of their retail clients. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Client<br>2 = House<br>4 = RO [C]<br>6 = Liquidity Provider<br>7 = Related Party [C]<br>8 = Structured Product Market Maker [C] |
| Conditions | It is mandatory for every NewOrder (01), CancelReplace (06) and Declaration Entry (40) messages. |
| Used In | Declaration Entry (40) |

| | |
|---|---|
| | Declaration Notice (42) |

## Account Type Cross

| | |
|---|---|
| Field Name | Account Type Cross |
| Description | Indicates the account type for which the sell side of a cross order is entered.<br>Only for Cross orders. |
| Used For | Cash |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Client<br>2 = House<br>4 = RO [C]<br>6 = Liquidity Provider<br>7 = Related Party [C]<br>8 = Structured Product Market Maker [C] |
| Conditions | For Declaration Entry (40) message it is mandatory when Side is equal to Cross. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Action Type

| | |
|---|---|
| Field Name | Action Type |
| Description | Provides the request to be performed on an existing declaration, which is identified by its Declaration ID. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Declaration Cancellation Request<br>2 = Declaration Refusal<br>3 = Trade Cancellation Request |
| Used In | Declaration Cancel and Refusal (43) |

# B

## Bypass Indicator

| | |
|---|---|
| Field Name | Bypass Indicator |
| Description | Control indicator of the price and quantity. Indicates whether it should bypass the price and quantity controls or not. (0: [indicated as False] means "Control" ; 1:[indicated as True] means "No Control") |
| Used For | TCS |
| Format | Boolean |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Conditions | For Fund Price Input (44) message, it indicates whether a NAV+/- should be checked against a percentage |

| | |
|---|---|
| | deviation from the last known NAV+/-. |
| Used In | Fund Price Input (44)<br>Fund Price Input Ack (45) |

# C

## CCP ID

| | |
|---|---|
| Field Name | CCP ID |
| Description | Clearing House code |
| Used For | Cash |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = LCH SA<br>6 = EuroCCP |
| Conditions | This field is mandatory when a transaction is cleared by a CCP. |
| Used In | Declaration Notice (42) |

## Centralisation Date

| | |
|---|---|
| Field Name | Centralisation Date |
| Description | Cut-off for the trading cycle / session on the Euronext Funds Service: Paris is not identified by the fund agent; as such there is no technical cut-off of a trading session set for such funds.<br>Centralisation date may be used by the client to inform the fund agent for which session the declaration should be eligible for, and may be used as a criteria by the fund agent to accept, or not, a declaration.<br>When used, the declaration should be automatically accepted for the following order collection cycle / session if:<br>- centralisation date is not specified by the client AND the session has passed its cut-off, OR<br>- centralisation date is specified, and fund agent elects not to acknowledge the declaration during the session identified in the broker's message AND doesn't reject the declaration.<br>Should be provided in binary equivalent of YYYY-MM-DD, where YYYY = 0000-9999, MM = 01-12, DD = 01-31<br>Should be provided for Euronext Funds Service: Paris instruments only. |
| Used For | Cash and Derivatives |
| Format | Alphanumerical ID |
| Length | 10 |
| Possible Values | (See field description) |
| Conditions | In outbound DeclarationNotice (42) message, it is always provided to Null value. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Clearing Firm ID

| | |
|---|---|
| Field Name | Clearing Firm ID |
| Description | Clearing firm ID.<br>Identifier of the give-up firm when a give-up is executed (a give-up is a trade executed by a firm for the |

| | |
|---|---|
| | client of another firm, the latter being referred to as the give-up firm). |
| Used For | Cash and Derivatives |
| Format | Alphanumerical ID |
| Length | 8 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Client Message Sequence Number

| | |
|---|---|
| Field Name | Client Message Sequence Number |
| Description | The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange. |
| Used For | Cash and Derivatives |
| Format | Sequence |
| Length | 4 |
| Possible Values | From 0 to 2^32-2 |
| Used In | Declaration Entry (40)<br>Declaration Cancel and Refusal (43)<br>Fund Price Input (44) |

## Client Order ID

| | |
|---|---|
| Field Name | Client Order ID |
| Description | Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.<br>Clients may provide any value that respects the Client Order ID format, which is an 8-byte signed integer, and the ranges as defined according to their access. The Exchange recommends setting an unique ID per order, Firm and Symbol Index.<br>For order entry, the Client Order ID value is not checked by the Exchange, it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request.<br>For modification and cancellation using the Original Client Order ID as unique identifier, the value is checked by the Exchange for possible duplicates, i.e. different orders submitted with the same Client Order ID. In case of duplication, the inbound request is rejected with the according error code. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 8 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Conditions | In outbound Declaration Notice (42) messages (from TCS) field Client Order ID is provided only if Declaration Status is set to 7 = Filled OR 13 = Pre-Matched. |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Declaration Cancel and Refusal (43)<br>Fund Price Input (44)<br>Fund Price Input Ack (45)<br>Declaration Entry Reject (46) |

## ClientIdentificationShortCode

| | |
|---|---|
| Field Name | ClientIdentificationShortCode |
| Description | MiFID II short code, Client identification code.<br>ESMA description of the field:<br>Code used to identify the client of the member or participant of the trading venue. In case of DEA, the code of the DEA user should be provided.<br>Where the client is a legal entity, the LEI code of the client shall be used.<br>Where the client is not a legal entity, the {NATIONAL_ID} shall be used.<br>In the case of aggregated orders, the flag AGGR shall be used.<br>In case of pending allocations, the flag PNAL shall be used. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 4 |
| Possible Values | From -2^31+1 to 2^31-1 |
| Conditions | This field is required for DEA User in every inbound message.<br>To indicate value of AGGR “1” shall be used.<br>To indicate value of PNAL “2” shall be used. |
| Used In | Declaration Entry (40) |

## ClientIdentificationShortCodeCross

| | |
|---|---|
| Field Name | ClientIdentificationShortCodeCross |
| Description | MiFID II short code, Client identification code.<br>ESMA description of the field:<br>Code used to identify the client of the member or participant of the trading venue. In case of DEA, the code of the DEA user should be provided.<br>Where the client is a legal entity, the LEI code of the client shall be used.<br>Where the client is not a legal entity, the {NATIONAL_ID} shall be used.<br>In the case of aggregated orders, the flag AGGR shall be used.<br>In case of pending allocations, the flag PNAL shall be used. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 4 |
| Possible Values | From -2^31+1 to 2^31-1 |
| Conditions | This field is required for DEA User in every inbound message.<br>To indicate value of AGGR “1” shall be used.<br>To indicate value of PNAL “2” shall be used.<br>For the inbound Declaration Entry (40) message it is to be provided when Side is equal to Cross and if the cross order is being submitted to cover orders of two different clients. |
| Used In | Declaration Entry (40) |

# D

## Declaration ID

| | |
|---|---|
| Field Name | Declaration ID |
| Description | Numerical declaration identifier assigned by the Exchange. |

| | |
|---|---|
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 8 |
| Possible Values | From 0 to 2^64-2 |
| Conditions | In the Declaration Entry Ack (42) message it provides the identifier of the declaration.<br>In the Declaration Notice (41) message it provides the identifier of the declaration.<br>In Declaration Cancel Refusal (43) it provides the ID of the declaration refused/to be cancelled. |
| Used In | Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Declaration Cancel and Refusal (43) |

## Declaration Status

| | |
|---|---|
| Field Name | Declaration Status |
| Description | Provides status of the Declaration. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = New Waiting for Counterparty Confirmation<br>2 = Confirmed by Counterparty<br>3 = Refused by Counterparty<br>4 = Pending Cancellation<br>5 = Cancelled<br>6 = Time Out<br>7 = Filled<br>8 = Restated<br>9 = Expiration of a pending declaration<br>10 = Elimination of a pending declaration<br>11 = Elimination of a pre-matched declaration following a CE<br>12 = Elimination of a pre-matched declaration by MOC<br>13 = Pre-Matched |
| Used In | Declaration Notice (42) |

# E

## EMM

| | |
|---|---|
| Field Name | EMM |
| Description | Defines the Exchange Market Mechanism applied on each platform. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Cash and Derivative Central Order Book (COB)<br>2 = NAV Trading Facility [C]<br>4 = Derivative Wholesales [D]<br>5 = Cash On Exchange Off book [C]<br>6 = Euronext off-exchange trade reports |

| | |
|---|---|
| | 7 = Derivative On Exchange Off book [D]<br>8 = ETF MTF - NAV Central Order Book [C]<br>99 = Not Applicable (For indices and iNAV) [C] |
| Conditions | In TCS messages only possible value is '5' = Cash On Exchange Off book. |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Fund Price Input (44)<br>Fund Price Input Ack (45)<br>Declaration Entry Reject (46) |

## End Time Vwap

| | |
|---|---|
| Field Name | End Time Vwap |
| Description | End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). |
| Used For | Cash |
| Format | Intraday Time in Seconds |
| Length | 4 |
| Possible Values | From 0 to 2^32-2 |
| Conditions | For Declaration Entry (40) message, it is mandatory for declarations when Operation Type = '5' ; and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Entering Counterparty

| | |
|---|---|
| Field Name | Entering Counterparty |
| Description | Identifies the counterpart of the transaction.<br>Clients may provide a Member ID or an Euronext Member ID. |
| Used For | TCS |
| Format | Alphanumerical ID |
| Length | 8 |
| Possible Values | (See field description) |
| | In Declaration Entry (40) it is mandatory when the declaration is not for a Fund.<br>In Declaration Entry (42) message provided only if previously set in the corresponding inbound Declaration Entry (40). |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Error Code

| | |
|---|---|
| Field Name | Error Code |
| Description | Error code in case of rejection.<br>Provides the return error code when a request is rejected for a functional or a technical reason. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |

| | |
|---|---|
| Length | 2 |
| Possible Values | From 0 to 2^16-2 |
| Used In | Declaration Entry Reject (46) |

## ExecutionWithinFirmShortCode

| | |
|---|---|
| Field Name | ExecutionWithinFirmShortCode |
| Description | MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.<br>ESMA description of the field:<br>Code used to identify the person (trader) or algorithm within the member or participant of the trading venue who is responsible for the execution of the transaction resulting from the order.<br>Where a natural person is responsible for the execution of the transaction, the person shall be identified by {NATIONAL_ID}<br>Where an algorithm is responsible for the execution of the transaction, this field shall be populated in accordance with Article 9 of [RTS 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014]<br>Where more than one person or a combination of persons and algorithms are involved in the execution of the transaction, the member or participant or client of the trading venue shall determine the trader or algorithm primarily responsible as specified in Article 9(4) of [RTS on trading obligations under Article 26 of Regulation (EU) No 600/2014] and populate this field with the identity of that trader or algorithm. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 4 |
| Possible Values | From -2^31+1 to 2^31-1 |
| Conditions | This field is mandatory for every application inbound messages. |
| Used In | Declaration Entry (40) |

# F

## Firm ID

| | |
|---|---|
| Field Name | Firm ID |
| Description | Identifier of the member firm that sends the message.<br>It is provided by the Exchange upon the registration of the Firm by the Membership department. |
| Used For | Cash and Derivatives |
| Format | Alphanumerical ID |
| Length | 8 |
| Possible Values | (See field description) |
| Conditions | In inbound messages it is the ID of the firm that sent the message.<br>In outbound messages it is the ID of the firm to which the message is sent. |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Declaration Cancel and Refusal (43)<br>Fund Price Input (44)<br>Fund Price Input Ack (45)<br>Declaration Entry Reject (46) |

## Free Text

| | |
|---|---|
| Field Name | Free Text |
| Description | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. |
| Used For | Cash and Derivatives |
| Format | Text |
| Length | 18 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Free Text Cross

| | |
|---|---|
| Field Name | Free Text Cross |
| Description | Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate. |
| Used For | Cash and Derivatives |
| Format | Text |
| Length | 18 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

# G

## Gross Trade Amount

| | |
|---|---|
| Field Name | Gross Trade Amount |
| Description | Total amount of a Declaration.<br>Indicates the global amount of a declaration when it is expressed as an amount. |
| Used For | TCS |
| Format | Amount |
| Length | 8 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Conditions | For inbound Declaration Entry (40) message (TCS), it is applicable only when Operation Type = '6' for a trade/declaration on Dutch Funds if expressed as an amount. If expressed as a quantity, this field should not be provided.<br>In outbound Declaration Notice (42) messages (from TCS) field Gross Trade Amount is provided only for message with the Operation Type = '6' AND Declaration Status set to 7 = Filled, 13 = Pre-Matched OR 5 = Cancelled. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Guarantee Flag

| | |
|---|---|
| Field Name | Guarantee Flag |
| Description | Indicates if the trade is guaranteed or not (for clearing purposes). |
| Used For | TCS |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed |
| Conditions | In outbound Declaration Notice (42) messages (from TCS) field Guarantee flag is provided if the field Settlement Flag is set to 1 = True. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## InvestmentDecisionWFirmShortCode

| | |
|---|---|
| Field Name | InvestmentDecisionWFirmShortCode |
| Description | MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision.<br>ESMA description of the field:<br>Code used to identify the person or the algorithm within the member or participant of the trading venue who is responsible for the investment decision.<br>Where a natural person(s) within the member or participant of the trading venue is responsible for the investment decision the person who is responsible or has primary responsibility for the investment decision shall be identified with the {NATIONAL_ID}<br>Where an algorithm is responsible for the investment decision the field shall be populated in accordance with Article 8 of [RTS 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014.] |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 4 |
| Possible Values | From -2^31 to 2^31-1 |
| Conditions | This field is mandatory when Account Type = Liquidity Provider, Related Party, House or Structured Product Market Maker; and only when DEA Indicator = 0. Also mandatory in in case in the field MIFID Indicators position 1 (InvestmentAlgoIndicator) is set to “1: Algorithm involved”; and only when DEA Indicator = 0.<br><br>Guideline for algorithm associated values: When an order message is flagged with the associated InvestmentAlgoIndicator (position 1) in the MiFID Indicators field set to value “0: No algorithm” involved then all positive values (from 0 to 2^31-1) would represent a human trader.<br>If the indicator is set to “1: Algorithm involved” clients are requested to populate this field with the ranges of values identified below. No technical checks would be performed to validate correctness of the ranges used.<br>- In –house algorithms with positive range of values between 0 to 2^31-1<br>- ISV algorithms : negative range of values between -2^31+1 to -1 |
| Used In | Declaration Entry (40) |

# M

## Message Sending Time

| | |
|---|---|
| Field Name | Message Sending Time |
| Description | Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC) |
| Used For | Cash and Derivatives |
| Format | Timestamp |
| Length | 8 |
| Possible Values | From 0 to 2^64-2 |
| Used In | Declaration Entry (40)<br>Declaration Cancel and Refusal (43)<br>Fund Price Input (44) |

## Message Sequence Number

| | |
|---|---|
| Field Name | Message Sequence Number |
| Description | Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange) |
| Used For | Cash and Derivatives |
| Format | Sequence |
| Length | 4 |
| Possible Values | From 0 to 2^32-2 |
| Used In | Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Fund Price Input Ack (45)<br>Declaration Entry Reject (46) |

## MIC of Secondary Listing

| | |
|---|---|
| Field Name | MIC of Secondary Listing |
| Description | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383. |
| Used For | Cash |
| Format | Alphanumerical ID |
| Length | 4 |
| Possible Values | (See field description) |
| Conditions | In inbound DeclarationEntry (40) messages for declaration on the secondary listing place (Operation Type = '7'), the field Symbol Index and MIC of Secondary Listing must be provided.<br>In associated outbound messages, provided only to acknowledge receipt of the original declaration. |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Declaration Entry Reject (46) |

## MiFID Indicators

| | |
|---|---|
| Field Name | MiFID Indicators |
| Description | Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.<br>- DEA Indicator: indicates whether the order was submitted via a Direct Electronic Access (DEA) connection or not. It must be set to 1 for DEA access. (0: No ; 1: Yes) If set to 1, then field ClientIdentificationShortCode must be populated.<br>- InvestmentAlgoIndicator: indicates whether the investment decision was submitted by a trading algorithm or not. (0: No algorithm involved ; 1: Algorithm involved) This value must be set to 1 for cases where Algorithm has made the Investment decision. If set to 1, then field InvestmentDecisionWFirmShortCode must be filled.<br>- ExecutionAlgoIndicator: indicates whether the order execution was submitted by a trading algorithm or not. (0: No algorithm involved ; 1: Algorithm involved)<br>- CommodityDerivativeIndicator: indicates for a commodity derivative or a warrant with a commodity underlying, if the trade reduces the risk. (0: Order not associated with reduction of risk for Commodity Derivatives or Warrants with Commodity underlyings ; 1: Risk Reduction flag for orders associated with Commodity Derivatives or Warrants with Commodity underlyings)<br>- Deferral Indicator: Indicates whether the order is candidate for a deferred publication of the resulting trade(s) or not. (0: Not Candidate ; 1: Candidate) |
| Used For | Cash and Derivatives |
| Format | Bitmap |
| Length | 1 |
| Possible Values | 0 = DEA Indicator<br>1 = InvestmentAlgoIndicator<br>2 = ExecutionAlgoIndicator<br>3 = CommodityDerivativeIndicator<br>*4 = Deferral Indicator* |
| Used In | Declaration Entry (40) |

## Miscellaneous Fee Amount

| | |
|---|---|
| Field Name | Miscellaneous Fee Amount |
| Description | Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order. |
| Used For | Cash and Derivatives |
| Format | Amount |
| Length | 8 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Used In | Declaration Notice (42) |

# O

## Operation Type

| | |
|---|---|
| Field Name | Operation Type |
| Description | Type of Operation. |
| Used For | TCS |

| | |
|---|---|
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Declaration of a trade outside the book<br>4 = Fund order (quantity)<br>5 = Declaration of a VWAP transaction<br>6 = Fund order (cash amount)<br>7 = Declaration of a trade on a Secondary listing place |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Declaration Entry Reject (46) |

# P

## Pre Matching Type

| | |
|---|---|
| Field Name | Pre Matching Type |
| Description | Pre-matching delay indicator for a TCS Declaration. |
| Used For | TCS |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Not pre-matched<br>2 = Pre-matched for the next fixing<br>3 = Pre-matched for the second next fixing<br>4 = Pre-matched for the third next fixing<br>5 = Pre-matched for the fourth next fixing<br>6 = Pre-matched for the fifth next fixing |
| Conditions | In inbound Declaration Entry (40) message (TCS), it is applicable only when Operation Type is '4' or '6'.<br>In outbound Declaration Notice (42) messages (TCS) provided only for message with the Operation Type '4' or '6'. |
| Used In | Declaration Entry Ack (41)<br>Declaration Notice (42) |

## Previous Day Indicator

| | |
|---|---|
| Field Name | Previous Day Indicator |
| Description | Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1") |
| Used For | TCS |
| Format | Boolean |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Used In | Declaration Notice (42) |

## Price

| | |
|---|---|
| Field Name | Price |
| Description | Price per unit of quantity (to be calculated with the Price/Index Level Decimals). |
| Used For | Cash and Derivatives |
| Format | Price |
| Length | 8 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Conditions | For DeclarationEntry (40), it must always be provided when Operation Type = '1', '5' or '7'.<br>For DeclarationNotice (42), it is provided when Operation Type = '1', '5' or '7'.<br>For a trade/declaration on Dutch Funds if expressed as an amount (Operation Type = '6'), this field should not be provided. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42)<br>Fund Price Input (44)<br>Fund Price Input Ack (45) |

## Principal Code

| | |
|---|---|
| Field Name | Principal Code |
| Description | Identifies the beneficiary of the transaction when trading on behalf of another establishment.<br>Clients may provide a TCS Member ID or an Euronext Member ID. |
| Used For | TCS |
| Format | Alphanumerical ID |
| Length | 8 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Principal Code Cross

| | |
|---|---|
| Field Name | Principal Code Cross |
| Description | Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order.<br>Clients may provide a TCS Member ID or an Euronext Member ID. |
| Used For | TCS |
| Format | Alphanumerical ID |
| Length | 8 |
| Possible Values | (See field description) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

# Q

## Quantity

| | |
|---|---|
| Field Name | Quantity |
| Description | Number of traded or ordered units (to be calculated with Quantity Decimals). |
| Used For | Cash and Derivatives |
| Format | Quantity |
| Length | 8 |
| Conditions | For Declaration Entry (40) message, it must always be provided when Operation Type = '1', '4', '5' or '7'.<br>For a trade/declaration on Dutch Funds if expressed as an amount (Operation Type = '6'), this field should not be provided. |
| Possible Values | From 0 to 2^64-2 |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

# R

## Rejected Message

| | |
|---|---|
| Field Name | Rejected Message |
| Description | Provides the ID (Template ID) of the rejected message.<br>E.g. 01 for NewOrder, 06 for CancelReplace... |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 1 |
| Possible Values | From 0 to 2^8-2 |
| Used In | Declaration Entry Reject (46) |

# S

## Settlement Flag

| | |
|---|---|
| Field Name | Settlement Flag |
| Description | Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled") |
| Used For | TCS |
| Format | Boolean |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Conditions | In outbound Declaration Notice (42) messages (from TCS) field Settlement Flag is always provided. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Settlement Period

| | |
|---|---|
| Field Name | Settlement Period |
| Description | Indicates the settlement delay in trading days, from 0 to 30 days. |
| Used For | TCS |
| Format | Numerical |
| Length | 1 |
| Possible Values | From 0 to 30 |
| Conditions | In outbound Declaration Notice (42) messages (from TCS) field Settlement Period is provided if the field Settlement Flag is set to 1 = True |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Side

| | |
|---|---|
| Field Name | Side |
| Description | Indicates the Executing Side. |
| Used For | TCS |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Buy<br>2 = Sell<br>3 = Cross |
| Conditions | Field mandatory in every inbound Declaration Entry (40) message.<br>In outbound Declaration Notice (42) messages provided only when Declaration Status is one of the following values: 1 = New Waiting for Counterparty Confirmation, 2 = Confirmed by Counterparty, 7 = Filled or 13 = Pre-Matched |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Start Time Vwap

| | |
|---|---|
| Field Name | Start Time Vwap |
| Description | Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day). |
| Used For | Cash |
| Format | Intraday Time in Seconds |
| Length | 4 |
| Possible Values | From 0 to 2^32-2 |
| Conditions | For Declaration Entry (40) message, it is used for declarations when Operation Type = '5' ; and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Symbol Index

| | |
|---|---|
| Field Name | Symbol Index |

| | |
|---|---|
| Description | Exchange identification code of the instrument.<br>This identifier is unique per triplet: MIC, ISIN and currency. The correspondence of the Symbol Index and with the instrument characteristics is provided in the standing data messages and associated files. |
| Used For | Cash and Derivatives |
| Format | Numerical ID |
| Length | 4 |
| Possible Values | From 0 to 2^32-2 |
| Conditions | For inbound messages, the Symbol Index must be specified. For second listing place trade, the Symbol Index and the MIC of secondary listing must be specified. |
| Used In | Declaration Entry (40)<br>Declaration Entry Ack (41)<br>Declaration Notice (42)<br>Fund Price Input (44)<br>Fund Price Input Ack (45)<br>Declaration Entry Reject (46) |

# T

## Trade Time

| | |
|---|---|
| Field Name | Trade Time |
| Description | Time of the trade.<br>Equals to the Matching Engine IN time (in ns), when the aggressor enters the matching engine. |
| Used For | Cash and Derivatives |
| Format | Timestamp |
| Length | 8 |
| Possible Values | From 0 to 2^64-2 |
| Conditions | Provided only in outbound Declaration Notice (42) messages (TCS) when Declaration Status is set to 7 = Filled. |
| Used In | Declaration Notice (42) |

## Trading Capacity

| | |
|---|---|
| Field Name | Trading Capacity |
| Description | Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Trading Capacity Cross

| | |
|---|---|
| Field Name | Trading Capacity Cross |
| Description | Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity. |
| Used For | Cash and Derivatives |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Dealing on own account (DEAL)<br>2 = Matched principal (MTCH)<br>3 = Any other capacity (AOTC) |
| Conditions | For DeclarationEntry (40) message, it is mandatory for Cross order and indicates the trading capacity of the sell side. |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

## Transaction Price Type

| | |
|---|---|
| Field Name | Transaction Price Type |
| Description | Contribution to price formation or the price discovery process. |
| Used For | Cash |
| Format | Enumerated |
| Length | 1 |
| Possible Values | 1 = Plain Vanilla Trade<br>2 = Non Price Forming Trade (NPFT)<br>3 = Trade Not Contributing to Price Discovery Process<br>4 = Dark Trade (For Future Use) |
| Conditions | For Declaration Entry (42) message, it is provided only if previously set in the corresponding inbound Declaration Entry (40). |
| Used In | Declaration Entry (40)<br>Declaration Notice (42) |

# W

## Waiver Indicator

| | |
|---|---|
| Field Name | Waiver Indicator |
| Description | Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.<br>ESMA description of the field:<br>Indication as to whether the transaction was executed under a pre-trade waiver in accordance with Articles 4 and 9 of Regulation (EU) 600/2014. For all instruments: 'LRGS' = Large in scale For equity instruments: 'RFPT' = Reference price transaction 'NLIQ' = Negotiated transactions in liquid financial instruments 'OILQ' = Negotiated transactions in illiquid financial instruments 'PRIC' = Negotiated transactions subject to conditions other than the current market price of that equity financial instrument. For non-equity instruments: 'SIZE' = Above specific size transaction 'ILQD' = Illiquid instrument transaction This field shall only be populated for the market side of a transaction executed under a waiver on a trading venue. |
| Used For | Cash and Derivatives |

| | |
|---|---|
| Format | Bitmap |
| Length | 1 |
| Possible Values | 0 = LRGS (for future use)<br>1 = RFPT<br>2 = NLIQ<br>3 = OILQ<br>4 = PRIC<br>5 = SIZE<br>6 = ILQD<br>7 = OMF (for future use) |
| Conditions | In outbound Declaration Notice (42) messages (from TCS) field Waiver Indicator is filled with one of the possible values if Declaration Status is set to 7 = Filled AND the transaction meets the conditions required for a waiver. |
| Used In | Declaration Entry Ack (41)<br>Declaration Notice (42) |

# 5. FIX 5.0 INTERFACE

## 5.1 FORMATTING FOR FIX MESSAGES

The general format of a OEG message is a standard header, followed by the message body fields and terminated with a standard trailer.

This section describes:

- The Conventions used for field format definition.
- The standard header and trailer of the private (or directed) messages used to communicate with the Order Entry Gateway (OEG) application, which provides access to members to Optiq.

Important Notes:

- Standard FIX header has been updated in intermediate versions of the overall Optiq message specifications – FIX interface, with inclusion of mandatory values, which also apply to the TCS messages in FIX protocol.
- Client should note that structurally impacting changes have been made in the overall FIX specifications document that must be taken into account together with TCS FIX messages provided in this document.

### 5.1.1 Field Format

A FIX message is composed of a collection of **"<Field tag>=<Field value>"** format. Every FIX field has an associated data type that limits the possible values for the characters used to fill this field.

According to FIX 5.0, all tags must have a value specified.

Table below provides the mapping for the types specified in the "Type" column of message tables and the FIX types described in the official FIX 5.0 specifications document.

| Format | Length | FIX 5.0 Type |
|---|---|---|
| Char | 1 | Char |
| String | N > 1 | String |
| Currency | 3 | Currency |
| Boolean | 1 | Boolean |
| Int | N | Int |
| Price | N | Price |
| Qty | N | Qty |
| Amt | N | Amt |
| Percentage | N | Percentage |
| Length | N | Length |
| Float | N | Float |
| LocalMktDate | 8 | LocalMktDate |
| SeqNum | N | SeqNum |
| MultipleCharValue | N | MultipleCharValue |

| NumInGroup | N | NumInGroup |
|---|---|---|
| MonthYear | N | MonthYear |
| UTCTimestamp | 27 | UTCTimestamp (Format: YYYYMMDD-HH:MM:SS.sssssssss) |

**Alphanumerical fields**: authorized characters are the following ones:

'0'..'9' 'a'..'z' 'A'..'Z' '"' '#' '$' '&' '(' ')' '+' '-' '.' ',' '/' ':' '<' '=' '>' '@' '*' '+' '^' '_' '`' '~' ',' '-'

**Numerical fields**: although binary data exist in FIX protocol (notion of raw data used by fields with FIX type "data"), such data are not used in the FIX messages for OEG. Numerical fields are expressed in ASCII characters '0'..'9' and decimal separator '.'.

**String fields**: authorized formats are alphanumeric free format strings, which can include any character or punctuation, except the delimiter. All String fields are case sensitive (i.e. Euronext != euronext).

- *Note:* certain fields are provided in string format (FIX 5.0 compliance) but the authorized characters are restricted to numerical values ('0'..'9') (e.g., fields using **FIRM ID**)

**Length**: the value provided in the "Len" column of the table above indicates the field length:

- When a value is provided (e.g. '1' for Char type, or '27' for UTCTimestamp type), it indicates that the field value must have the exact length indicated.
- When $N$ is used (e.g. String or Price types), it indicates that the related FIX type has no defined length according to FIX specifications. However, a value is usually provided in the message structures, indicating the maximum length of the field value according to OEG (the value may actually be shorter).

Please refer to the official FIX 5.0 specifications document (chapter "FIX PROTOCOL SYNTAX", section "Data Types") for further details.

- In all the message structures provided of this document (the tables representing the messages only):
  - Where a list of specific allowed values is provided, if the client provides data that is outside of the specified range, the message will be rejected
  - In the fields description the following pictograms represent:
    - [C] - the value is for Cash only;
    - [D] - the value is for Derivatives only;
    - [i] - special conditions apply to the displayed value. These conditions are detailed in the description of the corresponding field in the "Conditions" row.

**Price**: float field representing a price without decimal places. The real Price value must be calculated as described in the section §4.6 Price, Quantity, Ratio and Amounts Formats

**Qty**: float field representing a quantity without decimal places. The real quantity value must be calculated as described in the section §4.6 Price, Quantity, Ratio and Amounts Formats

**Amt**: float field representing an amout (typivally Price times Qty) without decimal places. The real amount value must be calculated as described in the section §4.6 Price, Quantity, Ratio and Amounts Formats

### 5.1.2 Structure Representation

Some messages may contain a subset of consecutive fields (a repeating group) that can be repeated a variable number of times.

Generally the number of times a repeating group is repeated is specified by the numerical field (the counter) preceding that group.

In this document, repeating groups (including their counter) are highlighted with heavy, dark green edges and light grey background, like in the example below:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

…

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | Counter | | | Repeating Group Counter | | | |
| | | | | Repeating Group | Min and max values affect the minimum and maximum message length | | |
| | | | | | | | |

Nested repeating components

In some cases it is necessary to have components (groups of fields) repeated within another repeating group, within a single FIX message. Such "sub"-groups are called nested repeating components. Nested repeating components are especially important in representation of the Parties component, identifying the multiple different cases of the entities participating in the order (e.g. various MIFID II related fields).

In this document, to easily differentiate from the repeating group within which they are used, nested repeating components are designated within the message definition via:

- Highlighting of the fields within the components with dark gray background, and
- Wider left green outline
- In the tag column, tag number preceded by the symbol "**->**" for all fields that comprise the nested repeating component

If a nested repeating component is used, they are always specified inside another repeating group (identifiable with a green outline and light grey background), and the outer repeating group is always specified.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

…

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | Counter | | | Repeating Group Counter | | | |
| | | | | Repeating Group | Min and max values affect the minimum and maximum message length | | |
| | | | | | | | |
| -> | Nested Counter | | | Nested Repeating Group Counter | | | |
| -> | | | | Nested Repeating Group | Min and max values affect the minimum and maximum message length | | |
| -> | | | | | | | |

### 5.1.3 FIX Optional Fields

Optional and conditional fields can be set to null value as defined by the FIX standard.

### 5.1.4 Date and Time Conventions

Date and Time provided in this document refer to the following names, and are provided in the following format:

- Date and Timestamps are expressed in UTC (Universal Time, Coordinated) and are synchronised using Precision Time Protocol (PTP). Their format is defined in number of nanoseconds since 01/01/1970 UTC, and is populated using a string of 27 characters, as follows :

| YYYYMMDD-HH:MM:SS.sssssssss |
|---|

  where:

  - "YYYY" is the year.
  - "MM" is the month.
  - "DD" is the day.
  - "HH" are the hour.
  - "MM" is the minute.
  - "SS" is the second.
  - "sssssssss" is the fraction of a second (nanoseconds).

- *Note:* Expiry Date and Time provided for Good Till Time (GTT) and Good Till Date (GTD) orders follow their own rules, please refer to the field description for further details.

### 5.1.5 Sequence Numbers

The Order Entry Gateway manages two sequence numbers:

- Message Sequence Number: this sequence number is incremented one by one by the OEG and per OE Session (physical connection). It is provided in every application outbound message.
- Client Message Sequence Number: this sequence number must be managed by the client's workstation and is mandatory for each application inbound message. It is recommended to increment this number one by one per OE Session (physical connection). Please note that this sequence is not checked by the OEG but will be useful for some specific recovery cases.

### 5.1.6 Price, Quantity, Ratio and Amount Formats

If a price is needed in the messages, it is expressed in currency or in percentages (generally for bonds).

The volume of the order is a number of Securities or an amount expressed in currency.

All prices are processed using two values:

- the price value (Signed/Unsigned Integer);
- the scale code (*Price/Index Level Decimals*).

Clients have to link each instrument to the associated "*Price/Index Level Decimals*" from the Standing Data message or file.

The prices must be calculated according to the following formula:

$$\text{Price} = \frac{Integer}{10^{\text{"Price/Index Level Decimals"}}}$$

For example, a price of 27.56 is sent in messages in the Price field as an Integer of 275600, if the "*Price / Index Level Decimals*" from the Standing Data is equal to 4.

- The same mechanism is used for:
  - All quantities with "*Quantity Decimals*"
  - All ratios and percentages with "*Ratio / Multiplier Decimals*"
  - All amounts with "*Amount Decimals*"

Prices, quantities, amounts for Mifid2 are not using this "*Price / Index Level Decimals"* behaviour.

### 5.1.7 Instrument Identification and EMM

#### 5.1.7.1 Symbol Index

An instrument is identified by its Symbol Index. In FIX protocol this value is provided in field **SecurityID (48).**

The standard security identifier (for example ISIN), mnemonic, tick size, instrument name and other instrument characteristics are carried only in the following Market Data **Standing Data** message (1007) ; and in the Standing Data files available on the Web and SFTI HTTPS server. As such, the client applications must link the Symbol Index (SecurityID) which is used in all messages, with other instrument characteristics present in the **Standing Data (1007)** message or file.

The Symbol Index (SecurityID) is assigned by Euronext and will not change for the lifetime of the instrument. The following rules will apply to the assignment of the Symbol Index:

In some extraordinary cases an instrument can move from one Optiq segment to another keeping its Symbol Index. Clients will always be notified in advance before such changes.

Any Corporate Action leading to a change of ISIN will lead to change of Symbol Index. These Corporate Actions are generally part of the mandatory reorganisation events; the most frequent ones being stock split, reverse stock split, change of name / denomination. However the ISIN change is not systematic and will be in any case communicated upfront through the Euronext Corporate Action notices.

**For further details on the Standing Data messages and files please refer to the *Euronext Cash and Derivatives Markets – Optiq MDG Client Specifications.***

#### 5.1.7.2 EMM

The Exchange Market Mechanism represents the platform to which the order sent by the client must be routed. It must be specified by clients each time a Symbol Index [provided in *SecurityID (48)*] is specified as it is used to route the order to the right platform. In FIX protocol this value is provided in the custom field **EMM (20020).**

## 5.2 FIX 5.0 MESSAGES

### 5.2.1 Important Notes

#### 5.2.1.1 Conditional Values in Outbound Messages

Please note that for the outbound messages (Client◀OEG) the "presence" of the fields in the block of the message is often set to "Conditional", which means that those fields might be populated with Null Value, when not required. As a single outbound message may cover several trading cases, it contains fields needed in all of these cases, which may be populated or not.

### 5.2.2 Administration Messages

As identified elsewhere in this document, the OEG dedicated to the TCS services, uses the same administrative messages described in other Optiq related documentation. The message structure, their content and kinematics of administrative messages for TCS is identical to those described for the OEG SBE and FIX formats. For more information clients are urged to review the format specific (SBE or FIX) message specifications documents.

### 5.2.3 Application Messages

#### 5.2.3.1 TradeCaptureReport (AE)

Available for: TCS

Client ▶OEG
**Message Usage:**

The **TradeCaptureReport** (AE) message is used for:

- sending of TCS Declarations (i.e. Declaration Entry)
- requesting cancellation of a previously matched declaration, or
- to refuse a declaration submitted by the counterparty

#### Components Usage within the Message:

TCS messages use repeating groups for provision of information for the clearing information and the following short code cases: ExecutionwithinFirmShortCode, ClientIdentificationShortCode and InvestmentDecisionwithinFirmShortCode repeating groups, fields and settings for identificatin of the Clearing data and the MIFID II short codes, as well as the associated rules and presence conditions in TradeCaptureReport (AE) message are identical to the ones identified for NewOrderSingle (D) provided in overall Optiq message specifications – FIX interface.

For TCS messages the additional repeating group combination is required to identify the Counterparty IDs, which should be provided with the following values:

- *PartyID (448)* = field in which the ID is provided
- *PartyIDSource (447)* = **D** (Proprietary / Custom Code)
- *PartyRole (452)* = **17** (Contra Firm)
- *PartyRoleQualifier (2376)* = **23** (Firm or legal entity)

For Cross declaration, if submitted to cover orders of two different clients, the combination used to provide the ClientIdentificationShortCode in repeating group NestedParties may be provided twice. As elsewhere the first instance of the field represents information provided for the buy side and the second represents information provided for the sell side.

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| | **Message Header** | | | | | **Mandatory** | |
| 571 | TradeReportID | Unique identifier of trade capture report. | String | 20 | From -2^63+1 to 2^63-1 | Mandatory | 93 |
| 1003 | TradeID | The unique ID assigned by the matching engine to the trade entity, once it is received or matched. | String | 20 | From 0 to 2^64-2 | Conditional | 92 |
| 487 | TradeReportTransType | Trade Report Transaction Type. | Int | 1 | 0 = New<br>1 = Cancel | Mandatory | 93 |
| 856 | TradeReportType | Trade Report Type. | Int | 1 | 1 = Alleged<br>3 = Decline<br>6 = Trade Report Cancel | Conditional | 94 |
| 828 | TrdType | Type of Operation. | Int | 4 | (See field description) | Conditional | 95 |
| 48 | SecurityID | Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files. | String | 10 | From 0 to 2^32-2 | Mandatory | 90 |
| 22 | SecurityIDSource | Gives the type of SecurityID. | String | 1 | 8 = Symbol Index | Mandatory | 91 |
| 20020 | EMM | Defines the Exchange Market Mechanism applied on each platform. | String | 2 | (See field description) | Mandatory | 81 |
| 552 | NoSides | Number of sides. | NumInGroup | 1 | If provided, from 1 to 2 | Conditional | 86 |
| 54 | Side | Indicates the side of the order. | Char | 1 | 1 = Buy<br>2 = Sell | Conditional | 92 |
| 1 | Account | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate. | String | 12 | Alphanumeric | Conditional | 78 |
| 6399 | AccountCode | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. | Int | 1 | (See field description) | Conditional | 78 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 29 | LastCapacity | MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. | Char | 1 | 7 = Dealing on own account (DEAL)<br>8 = Matched principal (MTCH)<br>9 = Any other capacity (AOTC) | Conditional | 82 |
| 58 | Text | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. | String | 18 | Alphanumeric | Optional | 92 |
| 20155 | PrincipalCode | Identifies the beneficiary of the transaction when trading on behalf of another establishment. | String | 20 | Alphanumeric | Optional | 89 |
| 53 | Quantity | Number of traded or ordered units (to be calculated with Quantity Decimals). | Qty | 20 | From 0 to 2^64-2 | Conditional | 90 |
| 44 | Price | Instrument price per quantity unit (to be calculated with Price/Index Level Decimals). | Price | 20 | From -2^63+1 to 2^63-1 | Conditional | 89 |
| 453 | NoPartyIDs | Number of PartyID entries. | NumInGroup | 1 | If provided, from 1 to 2 | Conditional | 85 |
| 448 | PartyID | Party identifier/code. See PartyIDSource (447) and PartyRole (452). | String | 11 | Alphanumeric | Conditional | 87 |
| 447 | PartyIDSource | Source of PartyID value. | Char | 1 | D = Proprietary / Custom code<br>P = Short code identifier | Conditional | 87 |
| 452 | PartyRole | Identifies the type or role of the PartyID (448) specified. | Int | 3 | 1 = Executing Firm<br>3 = Client ID<br>12 = Executing Trader<br>17 = Contra Firm | Conditional | 88 |
| 2376 | PartyRoleQualifier | Used to further qualify the value of PartyRole(452). | Int | 2 | 22 = Algorithm<br>23 = Firm or legal entity<br>24 = Natural person | Conditional | 88 |
| 21065 | MICofSecondaryListing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383. | String | 10 | (See field description) | Conditional | 83 |
| 2593 | NoOrderAttributes | Number of order attribute entries. | NumInGroup | 1 | If provided, from 1 to 2 | Optional | 85 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 2594 | OrderAttributeType | The type of order attribute. | Int | 1 | 0 = Aggregated order<br>1 = Pending allocation<br>3 = Risk reduction order | Optional | 86 |
| 2595 | OrderAttributeValue | The value associated with the order attribute type specified in OrderAttributeType (2594). | String | 1 | Y = Yes | Optional | 86 |
| 539 | NoNestedPartyIDs | Number of NestedPartyID entries. | NumInGroup | 1 | If provided, from 1 to 3 | Conditional | 85 |
| 524 | NestedPartyID | Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538). | String | 11 | Alphanumeric | Conditional | 83 |
| 525 | NestedPartyIDSource | Source of NestedPartyID value. | Char | 1 | D = Proprietary / Custom code<br>P = Short code identifier | Conditional | 84 |
| 538 | NestedPartyRole | Identifies the type or role of the NestedPartyID (524) specified. | Int | 3 | 3 = Client ID<br>4 = Clearing Firm<br>17 = Contra Firm<br>122 = Investment decision maker | Conditional | 84 |
| 2384 | NestedPartyRoleQualifier | Used to further qualify the value of NestedPartyRole(538). | Int | 2 | 3 = General clearing member<br>4 = Individual clearing member<br>22 = Algorithm<br>23 = Firm or legal entity<br>24 = Natural person | Conditional | 84 |
| 1724 | OrderOrigination | Identifies the origin of the order. | Int | 1 | 5 = Order received from a direct access or sponsored access customer | Conditional | 86 |
| 21063 | DeferralIndicator | Trade publication type indicator. Indicates whether the publication is immediate or not (differed). (1: Immediate ; 0: Differed) | Char | 1 | 0 = False<br>1 = True | Conditional | 80 |
| 10055 | SettlPeriod | Indicates the settlement delay in trading days, from 0 to 30 days. | Int | 2 | From 0 to 30 | Conditional | 91 |
| 9970 | SettlementFlag | Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled) | Char | 1 | 0 = False<br>1 = True | Conditional | 91 |
| 9971 | GuaranteeFlag | Indicates if the trade is guaranteed or not (for clearing purposes). | Char | 1 | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed | Conditional | 82 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 1839 | TradePriceCondition | Contribution to price formation or the price discovery process. | Int | 3 | 15 = Non-price forming trade (NPFT)<br>101 = Plain Vanilla Trade<br>102 = Trade Not Contributing to Price Discovery Process<br>103 = Dark Trade (For Future Use) | Optional | 93 |
| 10026 | VWAPBegTime | Start time for the Volume Weight Average price computation period. | UTCTimestamp | 27 | YYYYMMDD-HH:MM:SS.sss.nnn | Optional | 96 |
| 10027 | VWAPEndTime | End time for the Volume Weight Average price computation period. | UTCTimestamp | 27 | YYYYMMDD-HH:MM:SS.sss.nnn | Optional | 96 |
| 381 | GrossTradeAmt | Total amount of a Declaration. | Amt | 9 | Amount | Conditional | 81 |
| 21068 | CentralisationDate | Cut-off for the trading cycle / session on the Euronext Funds Service | String | 10 | Valid values:<br>YYYY = 0000-9999, MM = 01-12, DD = 01-31 | Optional | 78 |
| | **Message Trailer** | | | | | **Mandatory** | |

### 5.2.3.2 TradeCaptureReportAck (AR)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **TradeCaptureReportAck** (AR) message is sent in response to the **TradeCaptureReport** (AE) and **FundPriceInput** (U44) messages. It is also sent as an unsolicited message to provide the status of a previously submitted declaration to counterparties.

The message is sent as:

- Declaration notification to the counterparty;
- Declaration refusal notice;
- Matching Notice;
- Expiration Notice;
- Trade Cancellation Notice
- Rejection

Please note that the following fields are provided only in case the notice is issued for a Fill or a Pre-Match (*TrdRptStatus* = '18' or '19') and only to the concerned member if the corresponding necessary values were submitted in the original declaration: *TransactTime*, *NestedParties* (*Clearing Firm ID)*, *PrincipalCode*, *AccountCode*, *Account*, *Text*, *TrdRegPublicationReason*.

## Components Usage within the Message:

Use of the groups and values within them:

- The repeating group ***SideCrossOrdModGrp*** is used to identify the order side
- The repeating group ***Parties*** is also used to specify the Entering Counterparty for the order
- The repeating group ***NestedParties*** is used to specify the Clearing Firm for the order

For identification of the clearing firm or entering counterparty the fields in the repeating groups should be specified in the NestedParties repeating group, in the same manner as described in the *Euronext Cash Markets – OEG Client Specifications – FIX 5.0* Interface document.

For TCS messages the additional repeating group combination is required to identify the Counterparty IDs, which should be provided with the following values:

- *PartyID (448)* = field in which the ID is provided
- *PartyIDSource (447)* = **D** (Proprietary / Custom Code)
- *PartyRole (452)* = **17** (Contra Firm)
- *PartyRoleQualifier (2376)* = **23** (Firm or legal entity)

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| | **Message Header** | | | | | **Mandatory** | |
| 571 | TradeReportID | Unique identifier of trade capture report. | String | 20 | From -2^63+1 to 2^63-1 | Mandatory | 93 |
| 1003 | TradeID | The unique ID assigned by the matching engine to the trade entity, once it is received or matched. | String | 20 | From 0 to 2^64-2 | Conditional | 92 |
| 939 | TrdRptStatus | Trade Report Type. | Int | 2 | (See field description) | Conditional | 95 |
| 828 | TrdType | Type of Operation. | Int | 4 | (See field description) | Conditional | 95 |
| 48 | SecurityID | Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files. | String | 10 | From 0 to 2^32-2 | Mandatory | 90 |
| 22 | SecurityIDSource | Gives the type of SecurityID. | String | 1 | 8 = Symbol Index | Mandatory | 91 |
| 20020 | EMM | Defines the Exchange Market Mechanism applied on each platform. | String | 2 | (See field description) | Conditional | 81 |
| 21065 | MICofSecondaryListing | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383. | String | 10 | (See field description) | Conditional | 83 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 10042 | PreMatchingIndicator | Pre-matching delay indicator for a TCS Declaration. | Int | 1 | (See field description) | Conditional | 88 |
| 60 | TransactTime | Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss). | UTCTimestamp | 27 | Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds) | Conditional | 94 |
| 2670 | TrdRegPublicationReason | Waiver Indicator. ESMA description of the field: Indication as to whether the transaction was executed under a pre-trade waiver in accordance with Articles 4 and 9 of Regulation (EU) 600/2014. | Int | 2 | (See field description) | Conditional | 94 |
| 552 | NoSides | Number of sides. | NumInGroup | 1 | If provided, always set to 1 | Conditional | 86 |
| 54 | Side | Indicates the side of the order. | Char | 1 | 1 = Buy<br>2 = Sell | Conditional | 92 |
| 1 | Account | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate. | String | 12 | Alphanumeric | Conditional | 78 |
| 6399 | AccountCode | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. | Int | 1 | (See field description) | Conditional | 78 |
| 29 | LastCapacity | MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. | Char | 1 | 7 = Dealing on own account (DEAL)<br>8 = Matched principal (MTCH)<br>9 = Any other capacity (AOTC) | Conditional | 82 |
| 58 | Text | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. | String | 18 | Alphanumeric | Optional | 92 |
| 20155 | PrincipalCode | Identifies the beneficiary of the transaction when trading on behalf of another establishment. | String | 20 | Alphanumeric | Optional | 89 |
| 53 | Quantity | Number of traded or ordered units (to be calculated with Quantity Decimals). | Qty | 20 | From 0 to 2^64-2 | Conditional | 90 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 44 | Price | Instrument price per quantity unit (to be calculated with Price/Index Level Decimals). | Price | 20 | From -2^63+1 to 2^63-1 | Conditional | 89 |
| 453 | NoPartyIDs | Number of PartyID entries. | NumInGroup | 1 | If provided, from 1 to 2 | Conditional | 85 |
| 448 | PartyID | Party identifier/code. See PartyIDSource (447) and PartyRole (452). | String | 11 | Alphanumeric | Conditional | 87 |
| 447 | PartyIDSource | Source of PartyID value. | Char | 1 | D = Proprietary / Custom code | Conditional | 87 |
| 452 | PartyRole | Identifies the type or role of the PartyID (448) specified. | Int | 3 | 1 = Executing Firm<br>17 = Contra Firm | Conditional | 88 |
| 2376 | PartyRoleQualifier | Used to further qualify the value of PartyRole(452). | Int | 2 | 23 = Firm or legal entity | Conditional | 88 |
| 539 | NoNestedPartyIDs | Number of NestedPartyID entries. | NumInGroup | 1 | If provided, from 1 to 2 | Conditional | 85 |
| 524 | NestedPartyID | Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538). | String | 11 | Alphanumeric | Conditional | 83 |
| 525 | NestedPartyIDSource | Source of NestedPartyID value. | Char | 1 | D = Proprietary / Custom code<br>P = Short code identifier | Conditional | 84 |
| 538 | NestedPartyRole | Identifies the type or role of the NestedPartyID (524) specified. | Int | 3 | 4 = Clearing Firm<br>17 = Contra Firm<br>122 = Investment decision maker | Conditional | 84 |
| 2384 | NestedPartyRoleQualifier | Used to further qualify the value of NestedPartyRole(538). | Int | 2 | 3 = General clearing member<br>4 = Individual clearing member<br>22 = Algorithm<br>24 = Natural person | Conditional | 84 |
| 10055 | SettlPeriod | Indicates the settlement delay in trading days, from 0 to 30 days. | Int | 2 | From 0 to 30 | Conditional | 91 |
| 9970 | SettlementFlag | Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled) | Char | 1 | 0 = False<br>1 = True | Conditional | 91 |
| 9971 | GuaranteeFlag | Indicates if the trade is guaranteed or not (for clearing purposes). | Char | 1 | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed | Conditional | 82 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 1839 | TradePriceCondition | Contribution to price formation or the price discovery process. | Int | 3 | 15 = Non-price forming trade (NPFT)<br>101 = Plain Vanilla Trade<br>102 = Trade Not Contributing to Price Discovery Process<br>103 = Dark Trade (For Future Use) | Conditional | 93 |
| 10026 | VWAPBegTime | Start time for the Volume Weight Average price computation period. | UTCTimestamp | 27 | YYYYMMDD-HH:MM:SS.sss.nnn | Optional | 96 |
| 10027 | VWAPEndTime | End time for the Volume Weight Average price computation period. | UTCTimestamp | 27 | YYYYMMDD-HH:MM:SS.sss.nnn | Optional | 96 |
| 381 | GrossTradeAmt | Total amount of a Declaration. | Amt | 9 | Amount | Conditional | 81 |
| 9952 | PreviousDayFlag | Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1") | Boolean | 1 | 0 = False<br>1 = True | Conditional | 89 |
| 137 | MiscFeeAmt | Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order. | Amt | 20 | From -2^63+1 to 2^63-1 | Conditional | 83 |
| 9955 | ErrorCode | Error code in case of rejection. | Int | 5 | From 0 to 2^16-2 | Conditional | 81 |
| 372 | RefMsgType | The MsgType (35) of the FIX message being referenced. | String | 3 | Value received in the rejected inbound message, if any | Conditional | 90 |
| 21068 | CentralisationDate | Cut-off for the trading cycle / session on the Euronext Funds Service | String | 10 | Valid values:<br>YYYY = 0000-9999, MM = 01-12, DD = 01-31 | Optional | 78 |
| 21040 | CCPID | Clearing House code attached to a firm. (For Future Use) | Char | 1 | 1 = LCH SA<br>6 = EuroCCP | Conditionnal | 79 |
| | **Message Trailer** | | | | | **Mandatory** | |

### 5.2.3.3 FundPriceInput (U44)

Client ▶OEG
Available for: TCS
**Message Usage:**

The **FundPriceInput** (U44) message is used by the Dutch Fund Manager to send a price to TCS matching engine used for Fixing and in order to match declaration, when *TrdType = '1002'* or *'1003'*.

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| | **Message Header** | | | | | **Mandatory** | |
| 11 | ClOrdID | An identifier of an Order assigned by the Client when submitting an order to the Exchange. | String | 20 | From -2^63+1 to 2^63-1 | Mandatory | 79 |
| 22 | SecurityIDSource | Gives the type of SecurityID. | String | 1 | 8 = Symbol Index | Mandatory | 91 |
| 48 | SecurityID | Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files. | String | 10 | From 0 to 2^32-2 | Mandatory | 90 |
| 20020 | EMM | Defines the Exchange Market Mechanism applied on each platform. | String | 2 | (See field description) | Mandatory | 81 |
| 44 | Price | Instrument price per quantity unit (to be calculated with Price/Index Level Decimals). | Price | 20 | From -2^63+1 to 2^63-1 | Mandatory | 89 |
| 10053 | ByPassControlFlag | Control indicator of the price and quantity. Indicates whether a trade should bypass the price and quantity controls or not. (0: Control ; 1: No Control) | Char | 1 | 0 = False<br>1 = True | Conditional | 79 |
| | **Message Trailer** | | | | | **Mandatory** | |

### 5.2.3.4 FundPriceInputAck (U45)

Client ◀OEG
Available for: TCS
**Message Usage:**

The **FundPriceInputAck** (U45) message is sent to provide the positive acknowlewdgement of a previously submitted **FundPriceInput** (U44) message.

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| | **Message Header** | | | | | **Mandatory** | |
| 11 | ClOrdID | An identifier of an Order assigned by the Client when submitting an order to the Exchange. | String | 20 | From -2^63+1 to 2^63-1 | Mandatory | 79 |
| 22 | SecurityIDSource | Gives the type of SecurityID. | String | 1 | 8 = Symbol Index | Mandatory | 91 |

| Tag | Field | Short Description | Format | Len | Values | Presence | Page |
|---|---|---|---|---|---|---|---|
| 48 | SecurityID | Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files. | String | 10 | From 0 to 2^32-2 | Mandatory | 90 |
| 20020 | EMM | Defines the Exchange Market Mechanism applied on each platform. | String | 2 | (See field description) | Conditional | 81 |
| 44 | Price | Instrument price per quantity unit (to be calculated with Price/Index Level Decimals). | Price | 20 | From -2^63+1 to 2^63-1 | Mandatory | 89 |
| 10053 | ByPassControlFlag | Control indicator of the price and quantity. Indicates whether a trade should bypass the price and quantity controls or not. (0: Control ; 1: No Control) | Char | 1 | 0 = False<br>1 = True | Conditional | 79 |
| | **Message Trailer** | | | | | **Mandatory** | |

## 5.3 FIELD DESCRIPTION FOR FIX MESSAGE

# A

## Account

| | |
|---|---|
| Field Name | Account |
| Tag | 1 |
| Description | Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.<br>Note that the length of this field is currently 12 on cash markets and 14 on derivative markets. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 12 |
| Possible Values | Alphanumeric |
| Conditions | It is mandatory for every submission of a new TradeCaptureReport (AE) declaration message where TradeReportTransType is 0 = 'New'. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## AccountCode

| | |
|---|---|
| Field Name | AccountCode |
| Tag | 6399 |
| Description | Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.<br>For Cross orders it specifies the account type for which the buy side of a cross order is entered.<br>- Non-LP clients are not allowed to use the type '6' (Liquidity Provider).<br>- Only members acting as Retail Member Organizations (RMO) can send '4' (RO) orders on behalf of their retail clients. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 1 |
| Possible Values | 1 = Client<br>2 = House<br>4 = RO [C]<br>6 = Liquidity Provider<br>7 = Related Party [C]<br>8 = Structured Product Market Maker [C] |
| Conditions | Mandatory for every submission of a new TradeCaptureReport (AE) declaration message where TradeReportTransType is 0 = 'New'. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# B

## ByPassControlFlag

| | |
|---|---|
| Field Name | ByPassControlFlag |
| Tag | 10053 |
| Description | Control indicator of the price and quantity. Indicates whether a trade should bypass the price and quantity controls or not. (0: Control ; 1: No Control) |
| Used For | TCS |
| Format | Char |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Conditions | For Fund Price Input (44) message, it indicates whether a NAV+/- should be checked against a percentage deviation from the last known NAV+/-. |
| Used In | FundPriceInput (U44)<br>FundPriceInputAck (U45) |

# C

## CCPID

| | |
|---|---|
| Field Name | CCPID |
| Tag | 21040 |
| Description | Clearing House code |
| Used For | Cash |
| Format | Char |
| Length | 1 |
| Possible Values | 1 = LCH SA<br>6 = EuroCCP |
| Conditions | This field is mandatory when a transaction is cleared by a CCP. |
| Used In | TradeCaptureReportAck (AR) |

## CentralisationDate

| | |
|---|---|
| Field Name | CentralisationDate |
| Tag | 21068 |
| Description | Cut-off for the trading cycle / session on the Euronext Funds Service: Paris is not identified by the fund agent; as such there is no technical cut-off of a trading session set for such funds.<br>Centralisation date may be used by the client to inform the fund agent for which session the declaration should be eligible for, and may be used as a criteria by the fund agent to accept, or not, a declaration.<br>When used, the declaration should be automatically accepted for the following order collection cycle / session if:<br>- centralisation date is not specified by the client AND the session has passed its cut-off, OR<br>- centralisation date is specified, and fund agent elects not to acknowledge the declaration during the session identified in the broker's message AND doesn't reject the declaration. |

| | |
|---|---|
| | Should be provided in binary equivalent of YYYY-MM-DD, where YYYY = 0000-9999, MM = 01-12, DD = 01-31<br>Should be provided for Euronext Funds Service: Paris instruments only. |
| Used For | TCS |
| Format | String |
| Length | 10 |
| Possible Values | Valid values:<br>YYYY = 0000-9999, MM = 01-12, DD = 01-31 |
| Conditions | For TradeCaptureReport (AE) message, it is mandatory for declarations when TrdType = '1002' or '1003'. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## ClOrdID

| | |
|---|---|
| Field Name | ClOrdID |
| Tag | 11 |
| Description | An identifier of an Order assigned by the Client when submitting an order to the Exchange.<br>Clients must provide a ClOrdID in every inbound application message, otherwise the message will be immediately rejected by the OEG.<br>Clients may provide any value that respects the ClOrdID format, which is a string of 20 characters, and the ranges as defined according to their access. The Exchange recommends setting an unique ID per order, Firm and SecurityID.<br>For order entry, the ClOrdID value is not checked by the Exchange, it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request.<br>For modification and cancellation using the OrigClOrdID as unique identifier, the value is checked by the Exchange for possible duplicates, i.e. different orders submitted with the same ClOrdID. In case of duplication, the inbound request is rejected with the according error code. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 20 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Used In | FundPriceInput (U44)<br>FundPriceInputAck (U45) |

# D

## DeferralIndicator

| | |
|---|---|
| Field Name | DeferralIndicator |
| Tag | 21063 |
| Description | Trade publication type indicator. Indicates whether the publication is immediate or not (differed). (1: Immediate ; 0: Differed) |
| Used For | TCS |
| Format | Char |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |

| | |
|---|---|
| Conditions | For TradeCaptureReport (AE) message, it is mandatory when TrdType = '51', '1001' or '1004'. |
| Used In | TradeCaptureReport (AE) |

# E

## EMM

| | |
|---|---|
| Field Name | EMM |
| Tag | 20020 |
| Description | Defines the Exchange Market Mechanism applied on each platform. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 2 |
| Possible Values | 1 = Cash and Derivative Central Order Book (COB)<br>2 = NAV Trading Facility [C]<br>4 = Derivative Wholesales [D]<br>5 = Cash On Exchange Off book [C]<br>6 = Euronext off-exchange trade reports<br>7 = Derivative On Exchange Off book [D]<br>8 = ETF MTF - NAV Central Order Book [C]<br>99 = Not Applicable (For indices and iNAV) [C] |
| Conditions | In TCS messages only possible value is '5' = Cash On Exchange Off book. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR)<br>FundPriceInput (U44)<br>FundPriceInputAck (U45) |

## ErrorCode

| | |
|---|---|
| Field Name | ErrorCode |
| Tag | 9955 |
| Description | Error code in case of rejection.<br>Provides the return error code when a request is rejected for a functional or a technical reason. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 5 |
| Possible Values | From 0 to 2^16-2 |
| Used In | TradeCaptureReportAck (AR) |

# G

## GrossTradeAmt

| | |
|---|---|
| Field Name | GrossTradeAmt |
| Tag | 381 |

| | |
|---|---|
| Description | Total amount of a Declaration.<br>Indicates the global amount of a declaration when it is expressed as an amount. |
| Used For | TCS |
| Format | Amt |
| Length | 9 |
| Possible Values | Amount |
| Conditions | For inbound TradeCaptureReport (AE) message (TCS), it is applicable only when TrdType = '1003' for a trade/declaration on Dutch Funds if expressed as an amount. If expressed as a quantity, this field should not be provided.<br>In outbound TradeCaptureReportAck (AR) messages (from TCS) field GrossTradeAmt (381) is provided only for messages with TrdType = '1003' AND TrdRptStatus (939) set to 19 = Filled, 18 = Pre-Matched OR 2 = Cancelled |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## GuaranteeFlag

| | |
|---|---|
| Field Name | GuaranteeFlag |
| Tag | 9971 |
| Description | Indicates if the trade is guaranteed or not (for clearing purposes). |
| Used For | TCS |
| Format | Char |
| Length | 1 |
| Possible Values | 1 = Cleared but not Guaranteed<br>2 = Cleared and Guaranteed |
| Conditions | In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New<br>In outbound TradeCaptureReportAck (AR) messages (from TCS) field is provided if the field SettlementFlag (9970) is set to 1 = True |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# L

## LastCapacity

| | |
|---|---|
| Field Name | LastCapacity |
| Tag | 29 |
| Description | MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity. |
| Used For | Cash and Derivatives |
| Format | Char |
| Length | 1 |
| Possible Values | 7 = Dealing on own account (DEAL)<br>8 = Matched principal (MTCH)<br>9 = Any other capacity (AOTC) |
| Used In | TradeCaptureReport (AE) |

| | |
|---|---|
| | TradeCaptureReportAck (AR) |

# M

## MICofSecondaryListing

| | |
|---|---|
| Field Name | MICofSecondaryListing |
| Tag | 21065 |
| Description | Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383. |
| Used For | Cash |
| Format | String |
| Length | 10 |
| Possible Values | (See field description) |
| Conditions | In inbound TradeCaptureReport (AE) messages for declarations on the secondary listing place (TrdType = '1004'), the fields SecurityID and MICofSecondaryListing must be provided.<br>In associated outbound messages, provided only to acknowledge receipt of the original declaration |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## MiscFeeAmt

| | |
|---|---|
| Field Name | MiscFeeAmt |
| Tag | 137 |
| Description | Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order. |
| Used For | Cash |
| Format | Amt |
| Length | 20 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Used In | TradeCaptureReportAck (AR) |

# N

## NestedPartyID

| | |
|---|---|
| Field Name | NestedPartyID |
| Tag | 524 |
| Description | Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538). |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 11 |
| Possible Values | Alphanumeric |
| Conditions | Mandatory if NoNestedPartyIDs >= 1.<br>When used for MiFID short codes, the field's characters are restricted to numerical values ('0'.. '9'), with |

| | |
|---|---|
| | possible value range from -2^31+1 to 2^31-1.<br>For Counterparty and Clearing Firm ID used for On-Exchange Off-book declarations this field is provided in the TradeCaptureReportAck (AR) only to the Firm entering the Declaration and when TrdRptStatus (939) is Filled. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NestedPartyIDSource

| | |
|---|---|
| Field Name | NestedPartyIDSource |
| Tag | 525 |
| Description | Source of NestedPartyID value. |
| Used For | Cash and Derivatives |
| Format | Char |
| Length | 1 |
| Possible Values | D = Proprietary / Custom code<br>P = Short code identifier |
| Conditions | Mandatory if NoNestedPartyIDs >= 1<br>For Counterparty and Clearing Firm ID used for On-Exchange Off-book declarations this field is provided in the TradeCaptureReportAck (AR) only to the Firm entering the Declaration and when TrdRptStatus (939) is Filled. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NestedPartyRole

| | |
|---|---|
| Field Name | NestedPartyRole |
| Tag | 538 |
| Description | Identifies the type or role of the NestedPartyID (524) specified. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 3 |
| Possible Values | 3 = Client ID<br>4 = Clearing Firm<br>17 = Contra Firm<br>122 = Investment decision maker |
| Conditions | Mandatory if No NestedPartyIDs >= 1.<br>For Counterparty and Clearing Firm ID used for On-Exchange Off-book declarations this field is provided in the TradeCaptureReportAck (AR) only to the Firm entering the Declaration and when TrdRptStatus (939) is Filled. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NestedPartyRoleQualifier

| | |
|---|---|
| Field Name | NestedPartyRoleQualifier |
| Tag | 2384 |
| Description | Used to further qualify the value of NestedPartyRole(538). |

| | |
|---|---|
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 2 |
| Possible Values | 3 = General clearing member<br>4 = Individual clearing member<br>22 = Algorithm<br>23 = Firm or legal entity<br>24 = Natural person |
| Conditions | In Inbound messages Mandatory if NoNestedPartyIDs >= 1<br>In Outbound messages if submitted by the client, with exception of case listed below - if submitted by the client, filled in with this information.<br>- Exception case: in messages from TCS when the repeating group is used to provide the Clearing Firm ID. In this case, where PartyIdSource is set to D (Proprietary / Custom Code) AND NestedPartyRole (538) = 4 (Clearing Firm), this field is not provided.<br>For Counterparty used for On-Exchange Off-book declarations this field is provided in the TradeCaptureReportAck (AR) only to the Firm entering the Declaration and when TrdRptStatus (939) is Filled. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NoNestedPartyIDs

| | |
|---|---|
| Field Name | NoNestedPartyIDs |
| Tag | 539 |
| Description | Number of NestedPartyID entries. |
| Used For | Cash and Derivatives |
| Format | NumInGroup |
| Length | 1 |
| Possible Values | If provided, from 1 to 2 |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NoOrderAttributes

| | |
|---|---|
| Field Name | NoOrderAttributes |
| Tag | 2593 |
| Description | Number of order attribute entries. |
| Used For | Cash and Derivatives |
| Format | NumInGroup |
| Length | 1 |
| Possible Values | If provided, from 1 to 2 |
| Used In | TradeCaptureReport (AE) |

## NoPartyIDs

| | |
|---|---|
| Field Name | NoPartyIDs |
| Tag | 453 |

| | |
|---|---|
| Description | Number of PartyID entries. |
| Used For | Cash and Derivatives |
| Format | NumInGroup |
| Length | 1 |
| Possible Values | From 0 to 3, depending on the message |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## NoSides

| | |
|---|---|
| Field Name | NoSides |
| Tag | 552 |
| Description | Number of sides. |
| Used For | Cash and Derivatives |
| Format | NumInGroup |
| Length | 1 |
| Possible Values | From 1 to 2 |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# O

## OrderAttributeType

| | |
|---|---|
| Field Name | OrderAttributeType |
| Tag | 2594 |
| Description | The type of order attribute. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 1 |
| Possible Values | 0 = Aggregated order<br>1 = Pending allocation<br>3 = Risk reduction order |
| Conditions | Mandatory if NoOrderAttributes > 0. |
| Used In | TradeCaptureReport (AE) |

## OrderAttributeValue

| | |
|---|---|
| Field Name | OrderAttributeValue |
| Tag | 2595 |
| Description | The value associated with the order attribute type specified in *OrderAttributeType (2594).* |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 1 |

| | |
|---|---|
| Possible Values | Y = Yes |
| Conditions | Always set to Yes if OrderAttributeType (2594) is provided |
| Used In | TradeCaptureReport (AE) |

## OrderOrigination

| | |
|---|---|
| Field Name | OrderOrigination |
| Tag | 1724 |
| Description | Identifies the origin of the order. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 1 |
| Possible Values | 5 = Order received from a direct access or sponsored access customer |
| Conditions | Mandatory in case of a DEA access. |
| Used In | TradeCaptureReport (AE) |

# P

## PartyID

| | |
|---|---|
| Field Name | PartyID |
| Tag | 448 |
| Description | Party identifier/code. See PartyIDSource (447) and PartyRole (452). |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 11 |
| Possible Values | Alphanumeric |
| Conditions | Mandatory if NoPartyIDs >= 1.<br>When used for MiFID short codes, the field's characters are restricted to numerical values ('0'.. '9'), with possible value range from -2^31+1 to 2^31-1. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## PartyIDSource

| | |
|---|---|
| Field Name | PartyIDSource |
| Tag | 447 |
| Description | Source of PartyID value. |
| Used For | Cash and Derivatives |
| Format | Char |
| Length | 1 |
| Possible Values | D = Proprietary / Custom code<br>P = Short code identifier |
| Conditions | Mandatory if NoPartyIDs >= 1 |
| Used In | TradeCaptureReport (AE) |

| | |
|---|---|
| | TradeCaptureReportAck (AR) |

## PartyRole

| | |
|---|---|
| Field Name | PartyRole |
| Tag | 452 |
| Description | Identifies the type or role of the PartyID (448) specified. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 3 |
| Possible Values | 1 = Executing Firm<br>3 = Client ID<br>12 = Executing Trader<br>17 = Contra Firm |
| Conditions | Mandatory if NoPartyIDs >= 1. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## PartyRoleQualifier

| | |
|---|---|
| Field Name | PartyRoleQualifier |
| Tag | 2376 |
| Description | Used to further qualify the value of PartyRole(452). |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 2 |
| Possible Values | 22 = Algorithm<br>23 = Firm or legal entity<br>24 = Natural person |
| Conditions | Mandatory if NoPartyIDs >= 1 |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## PreMatchingIndicator

| | |
|---|---|
| Field Name | PreMatchingIndicator |
| Tag | 10042 |
| Description | Pre-matching delay indicator for a TCS Declaration. |
| Used For | TCS |
| Format | Int |
| Length | 1 |
| Possible Values | 1 = Not pre-matched<br>2 = Pre-matched for the next fixing<br>3 = Pre-matched for the second next fixing<br>4 = Pre-matched for the third next fixing<br>5 = Pre-matched for the fourth next fixing<br>6 = Pre-matched for the fifth next fixing |

| | |
|---|---|
| Conditions | In inbound TradeCaptureReport (AE) message (TCS), provided only when TrdType = '1002' or '1003'.<br>In outbound TradeCaptureReportAck (AR) messages (TCS) provided only for messages with TrdType is '1002' or '1003' |
| Used In | TradeCaptureReportAck (AR) |

## PreviousDayFlag

| | |
|---|---|
| Field Name | PreviousDayFlag |
| Tag | 9952 |
| Description | Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1") |
| Used For | TCS |
| Format | Boolean |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Used In | TradeCaptureReportAck (AR) |

## Price

| | |
|---|---|
| Field Name | Price |
| Tag | 44 |
| Description | Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).<br>It is mandatory for priced orders (Limit, Stop-limit) and must be set to Null Value where the price is irrelevant (Market, Stop-market, Peg, MTL). |
| Used For | Cash and Derivatives |
| Format | Price |
| Length | 20 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Conditions | For TradeCaptureReport (AE) message, always provided when TrdType = ‘51’, ‘1001’ or '1004'.<br>For a trade/declaration on Dutch Funds if expressed as an amount (TrdType = ‘1003’), this field should not be provided. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR)<br>FundPriceInput (U44)<br>FundPriceInputAck (U45) |

## PrincipalCode

| | |
|---|---|
| Field Name | PrincipalCode |
| Tag | 20155 |
| Description | Identifies the beneficiary of the transaction when trading on behalf of another establishment. |
| Used For | TCS |
| Format | String |
| Length | 20 |
| Possible Values | Alphanumeric |
| Used In | TradeCaptureReport (AE) |

| | |
|---|---|
| | TradeCaptureReportAck (AR) |

# Q

## Quantity

| | |
|---|---|
| Field Name | Quantity |
| Tag | 53 |
| Description | Number of traded or ordered units (to be calculated with Quantity Decimals). |
| Used For | Cash and Derivatives |
| Format | Qty |
| Length | 20 |
| Possible Values | From 0 to 2^64-2 |
| Conditions | For TradeCaptureReport (AE) message, it is always provided when TrdType = '51', '1001', '1002' or '1004'. For a trade/declaration on Dutch Funds if expressed as an amount (TrdType = '1003'), this field should not be provided. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# R

## RefMsgType

| | |
|---|---|
| Field Name | RefMsgType |
| Tag | 372 |
| Description | The MsgType (35) of the FIX message being referenced. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 3 |
| Possible Values | Value received in the rejected inbound message, if any |
| Conditions | This field is provided only if the message type is referenced in the rejection. |
| Used In | TradeCaptureReportAck (AR) |

# S

## SecurityID

| | |
|---|---|
| Field Name | SecurityID |
| Tag | 48 |
| Description | Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files. |
| Used For | Cash and Derivatives |
| Format | String |

| | |
|---|---|
| Length | 10 |
| Possible Values | From 0 to 2^32-2 |
| Conditions | For inbound messages, the SecurityID must be specified. For second listing place trade, the SecurityID and the MIC of secondary listing must be specified. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR)<br>FundPriceInput (U44)<br>FundPriceInputAck (U45) |

## SecurityIDSource

| | |
|---|---|
| Field Name | SecurityIDSource |
| Tag | 22 |
| Description | Gives the type of SecurityID. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 1 |
| Possible Values | 8 = Symbol Index |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR)<br>FundPriceInput (U44)<br>FundPriceInputAck (U45) |

## SettlementFlag

| | |
|---|---|
| Field Name | SettlementFlag |
| Tag | 9970 |
| Description | Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled) |
| Used For | TCS |
| Format | Char |
| Length | 1 |
| Possible Values | 0 = False<br>1 = True |
| Conditions | In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New<br>In outbound TradeCaptureReportAck (AR) messages (from TCS) field SettlementFlag (9970) is always provided |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## SettlPeriod

| | |
|---|---|
| Field Name | SettlPeriod |
| Tag | 10055 |
| Description | Indicates the settlement delay in trading days, from 0 to 30 days. |
| Used For | TCS |
| Format | Int |

| | |
|---|---|
| Length | 2 |
| Possible Values | From 0 to 30 |
| Conditions | In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New<br>In outbound TradeCaptureReportAck (AR) messages (from TCS) field is provided if the field SettlementFlag (9970) is set to 1 = True |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## Side

| | |
|---|---|
| Field Name | Side |
| Tag | 54 |
| Description | Indicates the side of the order. |
| Used For | TCS |
| Format | Char |
| Length | 1 |
| Possible Values | 1 = Buy<br>2 = Sell |
| | Field mandatory in every inbound TradeCaptureReport (AE) message where TradeReportTransType is 0 = New.<br>In outbound TradeCaptureReportAck (AR) messages provided only when TrdRptStatus (939) is one of the following values: 4 = Pending New, 10 = Verified, 19 = Filled or 18 = Pre-Matched. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# T

## Text

| | |
|---|---|
| Field Name | Text |
| Tag | 58 |
| Description | Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate. |
| Used For | Cash and Derivatives |
| Format | String |
| Length | 18 |
| Possible Values | Alphanumeric |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## TradeID

| | |
|---|---|
| Field Name | TradeID |
| Tag | 1003 |
| Description | The unique ID assigned by the matching engine to the trade entity, once it is received or matched. |
| Used For | Cash and Derivatives |

| | |
|---|---|
| Format | String |
| Length | 20 |
| Possible Values | From 0 to 2^64-2 |
| Conditions | In TradeCaptureReportAck (AR) message, in case of a declaration acknowledgment or notice it provides the identifier of the declaration.<br>In TradeCaptureReportAck (AR) message, in case of a declaration cancel and refusal it provides the identifier of the declaration refused/to be cancelled.<br>In inbound TradeCaptureReport (AE) message, provided by the client requesting cancellation of a previously matched declartation. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## TradePriceCondition

| | |
|---|---|
| Field Name | TradePriceCondition |
| Tag | 1839 |
| Description | Contribution to price formation or the price discovery process. |
| Used For | Cash |
| Format | Int |
| Length | 3 |
| Possible Values | 15 = Non-price forming trade (NPFT)<br>101 = Plain Vanilla Trade<br>102 = Trade Not Contributing to Price Discovery Process<br>103 = Dark Trade (For Future Use) |
| Conditions | In outbound **TradeCaptureReportAck** (AR) message provided only if previously set in the corresponding inbound **TradeCaptureReport** (AE) message |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## TradeReportID

| | |
|---|---|
| Field Name | TradeReportID |
| Tag | 571 |
| Description | Unique identifier of trade capture report. |
| Used For | TCS |
| Format | String |
| Length | 20 |
| Possible Values | From -2^63+1 to 2^63-1 |
| Conditions | In outbound TradeCaptureReportAck (AR) messages (from TCS) field TradeReportID (571) is provided only if TrdRptStatus (939) is set to 19 = Filled OR 18 = Pre-Matched |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## TradeReportTransType

| | |
|---|---|
| Field Name | TradeReportTransType |
| Tag | 487 |

| | |
|---|---|
| Description | Trade Report Transaction Type. |
| Used For | TCS |
| Format | Int |
| Length | 1 |
| Possible Values | 0 = New<br>1 = Cancel |
| Used In | TradeCaptureReport (AE) |

## TradeReportType

| | |
|---|---|
| Field Name | TradeReportType |
| Tag | 856 |
| Description | Trade Report Type. |
| Used For | TCS |
| Format | Int |
| Length | 1 |
| Possible Values | 1 = Alleged<br>3 = Decline<br>6 = Trade Report Cancel |
| Conditions | Field used in conjunction with field TradeReportTransType to identify the action type for the TCS declaration.<br>Used only to Decline, Cancel or Refuse a declaration. |
| Used In | TradeCaptureReport (AE) |

## TransactTime

| | |
|---|---|
| Field Name | TransactTime |
| Tag | 60 |
| Description | Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss). |
| Used For | Cash and Derivatives |
| Format | UTCTimestamp |
| Length | 27 |
| Possible Values | Valid values:<br>YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds) |
| Conditions | Provided only in outbound TradeCaptureReportAck (AR) messages (TCS) when TrdRptStatus (939) is set to 19 = Filled |
| Used In | TradeCaptureReportAck (AR) |

## TrdRegPublicationReason

| | |
|---|---|
| Field Name | TrdRegPublicationReason |
| Tag | 2670 |
| Description | Waiver Indicator. ESMA description of the field: Indication as to whether the transaction was executed under a pre-trade waiver in accordance with Articles 4 and 9 of Regulation (EU) 600/2014.<br>For all instruments: 'LRGS' = Large in scale For equity instruments: 'RFPT' = Reference price transaction 'NLIQ' = Negotiated transactions in liquid financial instruments 'OILQ' = Negotiated transactions in illiquid |

| | |
|---|---|
| | financial instruments 'PRIC' = Negotiated transactions subject to conditions other than the current market price of that equity financial instrument. For non-equity instruments: 'SIZE' = Above specific size transaction 'ILQD' = Illiquid instrument transaction This field shall only be populated for the market side of a transaction executed under a waiver on a trading venue. |
| Used For | Cash and Derivatives |
| Format | Int |
| Length | 2 |
| Possible Values | 0 = LRGS (for future use)<br>1 = RFPT<br>2 = NLIQ<br>3 = OILQ<br>4 = PRIC<br>5 = SIZE<br>6 = ILQD<br>7 = OMF (for future use) |
| Conditions | In outbound TradeCaptureReportAck (AR) messages (from TCS) field TrdRegPublicationReason (2670) is filled with one of the possible values if TrdRptStatus (939) is set to 19 = Filled OR 18 = Pre-Matched; AND the transaction meets the conditions required for a waiver |
| Used In | TradeCaptureReportAck (AR) |

## TrdRptStatus

| | |
|---|---|
| Field Name | TrdRptStatus |
| Tag | 939 |
| Description | Trade Report Type. |
| Used For | TCS |
| Format | Int |
| Length | 2 |
| Possible Values | 1 = Rejected<br>2 = Cancelled<br>4 = Pending New<br>5 = Pending Cancel<br>10 = Verified<br>12 = Time Out<br>13 = Restated<br>14 = Expiration of a pending declaration<br>15 = Elimination of a pending declaration<br>16 = Elimination of a pre-matched declaration following a CE<br>17 = Elimination of a pre-matched declaration by MOC<br>18 = Pre-Matched<br>19 = Filled |
| Used In | TradeCaptureReportAck (AR) |

## TrdType

| | |
|---|---|
| Field Name | TrdType |
| Tag | 828 |
| Description | Type of Operation. |
| Used For | TCS |

| | |
|---|---|
| Format | Int |
| Length | 4 |
| Possible Values | 51 = Volume weighted average trade<br>1001 = Declaration of a trade outside the book<br>1002 = Fund order (quantity)<br>1003 = Fund order (cash amount)<br>1004 = Declaration of a trade on a Secondary listing place |
| Conditions | Mandatory for every submission of a new TradeCaptureReport (AE) declaration message where TradeReportTransType is 0 = 'New'.<br>In Message TradeCaptureReportAck (AR) the field is not provided in case the message is being sent back to indicate rejection of the TradeCaptureReport (AE) message due to technical of data inconsistency in the message. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# V

## VWAPBegTime

| | |
|---|---|
| Field Name | VWAPBegTime |
| Tag | 10026 |
| Description | Start time for the Volume Weight Average price computation period. |
| Used For | Cash |
| Format | UTCTimestamp |
| Length | 27 |
| Possible Values | YYYYMMDD-HH:MM:SS.sss.nnn |
| Conditions | For TradeCaptureReport (AE) message, it is provided only for declarations when TrdType '51' (Volume weighted average trade), and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session, and if not provided it is assumed that the VWAP calculation period starts at the beginning of the trading session. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

## VWAPEndTime

| | |
|---|---|
| Field Name | VWAPEndTime |
| Tag | 10027 |
| Description | End time for the Volume Weight Average price computation period. |
| Used For | Cash |
| Format | UTCTimestamp |
| Length | 27 |
| Possible Values | YYYYMMDD-HH:MM:SS.sss.nnn |
| Conditions | For TradeCaptureReport (AE) message, it is provided only for declarations when TrdType '51' (Volume weighted average trade), and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session. |
| Used In | TradeCaptureReport (AE)<br>TradeCaptureReportAck (AR) |

# APPENDIX A: REVISION HISTORY

## DOCUMENT HISTORY

| REVISION NO. | DATE | AUTHOR | CHANGE DESCRIPTION |
|---|---|---|---|
| 1.4.1 | 20 Jul 2018 | BA Team – FCO | **The following fields have been modified in SBE & FIX :**<br>- I*D CCP* : Renamed to 'CCP ID'<br>- *IDCCP (*21040) : Renamed to 'CCPID' |
| 1.4.0 | 22 Jun 2018 | BA Team – FCO | **The following messages have been updated:**<br>- **Declaration Notice (42):** Added field 'I*D CCP*'<br>- **TradeCaptureReportAck (AR)**: Added field '*IDCCP*' |
| 1.3.0 | 25 Apr 2018 | BA Team – LPI/FLO | **The following fields have been modified in Bin & FIX, to adjust their value, length and descriptions:**<br>- *TradeID* (1003) : updated conditions<br>- *Transaction Price Type, TradePriceConditions (1839)*: added conditions<br>- *Centralisation Date, CentralisationDate (21068)* : updated description<br>**The following messages have been updated:**<br>- **SBE Declaration Entry (40):** *Transaction Price Type* presence changed from Mandatory to Optional ; *Entering Counterparty* presence changed from Mandatory to Conditional<br>- **SBE Declaration Notice (42):** *Entering Counterparty* presence changed from Mandatory to Conditional<br>- **TradeCaptureReport (AE):** *TradePriceCondition* (1839) presence changed from Mandatory to Optional ; added back *CentralisationDate (21068)* field<br>- **TradeCaptureReportAck (AE):** updated *NoPartyIDs (453)* possible value ; added back *CentralisationDate (21068)* field |
| 1.2.0 | 13 Feb 2018 | BA Team – LPI/FLO | **The following section has been updated:**<br>- 2.2.7 Successful Declaration for the Funds<br>**The following section has been removed:**<br>- Work In Progress<br>**The following section has been added:**<br>- 5.1 Formatting for FIX messages: updated with important notes<br>**The following field has been removed from FIX fields description:**<br>- *CentralisationDate* (21068)<br>**The following fields have been modified in Bin & FIX, to adjust their value, length and descriptions:**<br>- *TrdType* (828) : updated field length<br>- *Account*: updated field length<br>- *Settlement Period*: updated possible values and conditions<br>- *EMM*: only value 5 will be used for TCS (value 2 is no longer used)<br>- *Operation Type* and *TrdType* (828): removal of Prorogation buy and Prorogation Sell<br>- *End Time Vwap, Start Time Vwam, VWAPBegTime (10027) and VWAPEndTIme (10028):* updated presence from Conditional to Optional<br>- *MiFID Indicator:* updated values and description<br>- *TradePriceCondition* (1839) : updated field length |

| REVISION NO. | DATE | AUTHOR | CHANGE DESCRIPTION |
|---|---|---|---|
| | | | - *LastCapacity* (29) : updated field length ; values fully replaced<br>- *Side* (54) : updated field condition<br>- *Waiver Indicator*: updated conditions<br>- *Settlement Flag*: added conditions<br>- *Guarantee Flag*: added conditions<br>- *Client Order ID*: added conditions<br>- *Gross Trade Amount*: updated conditions<br>- *MIC of Secondary Listing*: updated conditions<br>- *Pre Matching Type:* updated conditions<br>- *Trade Time:* added conditions<br>- *ClientIdentificationShortCodeCross:* new field<br>- *TradeReportID* (571) : updated field condition<br>- *NoNestedParty* (539) *:* updated values to “If provided, from 1 to 3”<br>- *NestedPartyRole* (538) : Add value "3 = Client ID"<br>- *NestedPartyRoleQualifier* (2384) : Add value "23 = Firm or legal entity"<br>- *Centralisation Date:* set “For future use” and updated conditions<br>- *Clearing Firm ID:* updated presence from Mandatory to Optional<br>**<u>The following messages have been updated:</u>**<br>- **SBE Declaration Entry (40):** Added *InvestmentDecisionWFirmShortCode* and *ClientIdentificationShortCodeCross*; *Price* and *Quantity* presence changed from Mandtory to Conditional<br>- **SBE Declaration Notice (42):** Removal of field *CentralisationDate*; *Price* and *Quantity* presence changed from Mandatory to Conditional<br>- **FIX TradeCaptureReport (AE):** Removal of fields *CentralisationDate* (21068), *OrderOrigination* (1724)<br>- **FIX TradeCaptureReportAck (AR):** Removal of fields *CentralisationDate* (21068), OrderOrigination (1724) |
| 1.1.0 | 7 Aug 2017 | BA Team – DCO | • Modified presence of fields:<br>  ○ SymbolIndex and EMM in SBE messages from conditional to mandatory<br>  ○ Price and Quantity in SBE messages from mandatory to conditional<br>• Updated conditions of SBE field descriptions for Price and Quantity<br>• Added a new section (5) “FIX 5.0 Messages” containing formatting, message structures and field descriptions for FIX 5.0 interface<br>• Fixes of typographical errors in kinematics |
| 1.0.0 | 13 Jul 2017 | BA Team - LPI | First Release |