CORPORATE

TRADEcho

TRADEcho PostTrade APA & On-Exchange/Off-Book FIX Specification

1.1.16.0_v1

Disclaimer

London Stock Exchange has taken reasonable efforts to ensure that the information contained in this publication is correct at the time of going to press but shall not be liable for decisions made in reliance on it. London Stock Exchange will endeavor to provide notice to customers of changes being made to this document, but this notice cannot be guaranteed. Therefore, please note that this publication may be updated at any time. The information contained in this publication and any other publications referred to herein are for guidance purposes only.

TABLE OF CONTENTS

About this document

FIX specification for interaction with TRADEcho services for APA direct and Off-Book reporting to the LSE.

Intended audience

Technical teams responsible for developing connectivity to the TRADEcho post-trade transparency services.

Related documents

- TRADEcho MiFID II PostTrade SRR Only FIX Specification
- TRADEcho Portal User Guide
- TRADEcho Connectivity Guide
- MIT201—Guide to the Trading System
- MIT401 – Guide to Reference Data Services
- TRADEcho Cloud FAQ's Document

Terms and acronyms

Term/Acronym	Description
TRADEcho Cloud	New TRADEcho Cloud Platform
TRADEcho On-Prem	Current TRADEcho Production System
APA	Approved Publication Arrangement
ARM	Approved Reporting Mechanism
CCP	Central Counterparty
ESMA	European Securities and Market Authority
ISIN	International Securities Identification Number
LEI	Legal Entity Identifiers
LIS	Large-in-Scale
LSE	London Stock Exchange
MiFID	Markets in Financial Instruments Directive
MTF	Multilateral Trading Facility
MMT	Market Model Typology
OTC	Over-the-Counter
OTF	Organised Trading Facility
SI	Systematic Internaliser
SSTI	Size Specific to Instrument
TCR	Trade Capture Report
TCR-Ack	Message used to Acknowledge / Reject trade capture reports received from a client
TCR-C	Trade report or instruction on a trade report sent from clients to the APA
TCR-S	The server initiated Trade Capture Report message (TCR-S) is an enrichment message sent from the APA to clients
MIC	Market Identifier Code

Revision history

This document has been revised according to the following table:

Version	Change	Date
1.1.13.0_v1	Changes in this document compared to 3.1.7-RevD • Following sections removed from this document (Sections from 3.16 in RevC) Removed as they are not relevant to the APA functionality but SRR ▪ Section 1.2 - Smart Report Router (SRR) and APA overview ▪ Section 1.6 - Differences in TCR fields between the SRR and TRADEcho APA services ▪ Section 3.0 - SRR message flows ▪ Section 4.0 - SRR trade report messaging Removed as the information is amalgamated into one section in this document (section 1.10.1 added) ▪ Section 1.12.2 – Rounding ▪ Section 1.20 - Notation o Section 1.12.1 - Tick Sizes – Not used in the New TRADEcho Platform o Section 1.17.1 - The Reporting Obligation and Deferrals for Packages – The functionality doesn't exist o Section 1.18 - SI MIC – The same information is shown in MIC section • Section 1.10.1 (new section added) o Added a section on Notation and number of decimals in TRADEcho Cloud • Section 1.13.1 o On venue off book trades (OnExchange trades) can be submitted with LEI's of LSE Members • Section 1.14.1 o Deferral for NEQ trades sent with Pending Price • Section 1.16 o Quantity in measurement unit is used for deferral calculation for any of the Emission Allowances and Emission Allowance Derivatives • Section 1.17 o Removed turnover calculation based on denominated par value. • Section 2.1 o Updated details about second login attempt by the same SenderCompID • Section 2.5 o Updated message rate throttling mechanism in TRADEcho Cloud	July 2024

	• Section 2.6.5
	  o Added 3 SessionRejectReason (373)
	  0 = Invalid tag number
	  10 = Sending Time accuracy problem
	  14 = Tag specified out of required order
	• Section 2.6.8
	  o Removed SessionStatus (1409) = 3 (New Password Does Not Comply with Policy) from logout message
	  o Added SessionStatus (1409) = 104 (Application not available) from logout message
	• Section 4.1
	  o Removed conditionally required rules for 854 (QtyType) = 1 and 2
	  o Removed conditionally required rules for 996 (UnitOfMeasure) - Required for commodity derivatives and emission allowance derivatives
	  o Updated description of LastMkt(30) field
	  o Updated description of TradePublishIndicator(1390) field
	• Section 4.2
	  o Added Text (58) to the TCR-Ack
	  o Updated reject codes in TradeReportRejectReason (751) tag
	  o Added a new enum in TrdRptStatus (939) = Held (4)
	• Section 4.3
	  o Updated description of EmissionAllowanceType(25007) field	

1.1.14.0_v1	• Section 1.14 – Package Trades
	  o Reworded package trade description for better clarity
	• Section 1.17 – HELD trades
	  o New section added defining a new functionality
	• Section 4 – TCR-C, TCR-S, TCR-Ack
	  o Added SecondaryFirmTradeID (1042) to the TCR-Ack
	  o Party ID (448) value sent in TCR-C will be truncated to 11 characters when 452=12 or 452=117
	  o Updated the description of Text (58) in the TCR-Ack
	  o Added PackageID(2489), TradeNumber(2490), TotNumTradeReports(748) in TCR-S
	• Section 5.1 – Submitting new trades
	  o Updated the description of Notional Currency
		Oct 2024

1.1.15.0_v1	• Section 1.17 – HELD trades
	  o more information added on held trades (no functional changes from previous release)
	• Section 4 – TCR-C, TCR-S, TCR-Ack
	  o Removed the conditional requirement of SecondaryTrdType(855) in TCR-S.
		Dec 2024

1.1.16.0_v1	• Section 1.5 - Hours of operation	Jul 2025

	○ Corrected the time when TRADEcho systems operate, to make it in line with existing timeframes. • Section 2.6.5 - Reject ○ Corrected the list of enums for tag 313 SessionRejectReason • Section 4.1 – TradeCaptureReport – MsgType "AE" – Client to APA ○ Condition for Settlement Date field was corrected • Section 1.13 - Counterparty types and identification codes ○ Description of SI MIC was corrected to make it in line with the existing TRADEcho behaviour • Section 4.1 - TradeCaptureReport – MsgType "AE" – Client to APA ○ Description of SI MIC was corrected to make it in line with the existing TRADEcho behaviour ○ Description of LastQty was corrected to make it in line with the existing TRADEcho behaviour	

1 Introduction

TRADEcho is the service name for the London Stock Exchange Group's transparency services. TRADEcho facilitates efficient, multi-asset class, trade and Systematic Internaliser quote publication.

The TRADEcho service is hosted and operated by the London Stock Exchange. TRADEcho team provides specialist product and regulatory knowledge.

1.1 TRADEcho

Under MiFID II TRADEcho will offer:

- Pre-trade SI quoting - Publishing quotes via London Stock Exchange's (LSE) market data feeds, TRADEcho's website, client websites and the service's portal;
- Post-trade trade reporting - An APA (Approved Publication Arrangement) service supporting OTC, SI, OTF, MTF, and on-exchange off-book reporting under the rules of the LSE;
- Smart Report Router - Clients can send trades into the SRR service and use the easy-to-configure rules engine to determine **IF** a report is eligible for publication and **by WHOM**, then send it to an APA service that will determine **WHEN** to publish the report;
- Support for all asset classes covered by MiFID II, including equities, depositary receipts, ETFs, equity derivatives, commodities, fixed income and other financial instruments;
- A web-based portal providing access to the services.

This document outlines the FIX message specification for clients connecting directly to the TRADEcho APA for post transparency and for taking off-book trades onto (under the rules of) the LSE. It does not include functionality descriptions when connecting to the TRADEcho SRR (Smart Report Router) service.

1.2 APA (Approved Publication Arrangement)

Approved publication arrangement (APA) means a firm authorised under the provisions established in MiFID II to provide the service of publishing trade reports on behalf of investment firms.

APAs, Approved Reporting Mechanisms (ARMS) and Consolidated Tape Providers (CTPs) are new categories of Data Reporting Service Providers (DRSPs) under MiFID II.

Article 20 MiFIR states that, "investment firms which, either on own account or on behalf of clients, conclude transactions in shares, depositary receipts, ETFs, certificates and other similar financial instruments traded on a trading venue, shall make public the volume and price of those transactions and the time at which they were concluded. That information shall be made public through an APA". A similar obligation is introduced for bonds, structured finance products, emission allowances and derivatives traded on a trading venue in Article 21 MiFIR.

The APA is required to have adequate policies and arrangement in place to make public the information required under Articles 20 and 21 MiFIR as close to real time as is "technically possible".

For further details on each service please reference the APA and SRR Service Descriptions which are available on the TRADEcho Client Hub:

www.TRADEcho.com/users/clienthub

Note: **For further information about APA functionality, please refer to the APA User Guide**

1.3 FIX overview

This document describes the TRADEcho FIX protocol implementation for entering trade reports using FIX.5.0.SP2 (including earlier FIX release features).

It is assumed that the reader is familiar with FIX v.5.0 and MMT as detailed by the FIX Protocol Organisation. For further information on FIX please see:

Fix 5.0 SP2 Specification:

https://www.fixtrading.org/standards/fix-5-0-sp-2/

MMT:

https://www.fixtrading.org/mmt/

MiFID II working groups:

https://www.fixtrading.org/working-groups/

1.3.1 FIX Market Model Typology (MMT)

TRADEcho supports the use of the industry standard FIX MMT (Market Model Typology). For more information, see https://www.fixtrading.org/mmt/.

"The MMT initiative is a collaborative effort established by a broad range of industry participants (trading/reporting venues, data vendors and buy/sell side participants). The initiative is committed to achieving a practical and common solution for standards on post-trade data across all asset classes subject to MiFID II. The initiative unites a variety of industry participants in the basic belief that we can and should act without any further delay to improve the consistency and comparability of data from different sources.

To achieve this goal, we have developed the Market Model Typology (MMT) project, which found its original inspiration in the 2010 CESR Technical Working Group recommendations. The latest MMT version delivers an efficient operational solution for fulfilling trade flagging requirements raised in MiFID II RTS 1 and RTS2. The model is available for immediate adoption and can be used by vendors and clients. In addition to the work on standards for RMs and MTFs, we continue to attract wide-ranging industry support for the standards and are working to expedite their broad implementation, notably to define OTC trading reporting rules."

1.3.2 This specification reflects the latest version of MMT at the time of writing. Notification will be given if further MMT updates are made that impact the TRADEcho APA. Conventions Used

For the sake of readability some field names in the message tables have been split across 2 lines; in all cases, all FIX fields have no spaces in their names.

All message specification field tables presented in this document have a **Reqd** column populated with a **Y**, **C** or **N**. These are defined as:

1. For messages from the client to TRADEcho:

Y = Mandatory—must be populated with a value of appropriate data type otherwise a level-1 reject (**MsgType** = **3**) will be sent back to the client with **SessionRejectReason** (373) = **1** (Required Tag Missing)

C = Conditional—must be populated if another field's value depends upon it. The field's description usually contains the phrase, "Required when…". If not populated when conditionally required, this should result in a level-2 reject (**MsgType** = **j**) with **BusinessRejectReason** (380) = **5** (Conditionally required field missing)

N = An optional field but may be needed to support specific business logic. Often used in conjunction with default values which may therefore require overriding by the client. Values considered as unacceptable for the given business scenario may result in any of the 3 reject-level messages. Other values may cause warning or informational fields to be populated on the TCR-S.

2. For messages from TRADEcho to the client:

   Y = Always populated with a valid value

   C = Will be populated if required by another field's value

   N = May be populated

1.4 The trade capture report

The FIX message used by TRADEcho APA to model trade information is the TradeCaptureReport (message type AE). The FIX message TradeCaptureReportAck (AR) is used for application level acknowledgements. In this document these two messages are abbreviated TCR and TCR-Ack respectively.

The TCR is used both when a client submits trade information to TRADEcho (i.e. a client initiated TCR), and when TRADEcho sends back enriched trade information (i.e. a server initiated TCR). These two versions of the TCR are abbreviated TCR-C and TCR-S respectively.

The different flavors of these messages are:

- TCR: TradeCaptureReport (AE)
- TCR-C: TradeCaptureReport from client to TRADEcho
- TCR-S: TradeCaptureReport from TRADEcho to client
- TCR-Ack: Application level acknowledgement of a TCR-C

The standard messaging flow is:

1. Client sends a TCR-C to TRADEcho
2. TRADEcho acknowledges the TCR-C with a TCR-Ack
3. If the client message was accepted, TRADEcho sends a TCR-S with enriched fields back to the client. For APA clients the message can also be sent to the counterparty.
4. In case of deferrals a second TCR-S is sent from TRADEcho when the trade has been published

1.5 Hours of operation

The current intention is to operate the service as follows (all in UK time):

Service	TRADEcho Cloud CDS	TRADEcho Cloud LCDS	TRADEcho Cloud PRODUCTION
FIX Engine and Portal availability	03:10:00 – 21:15:00	03:10:00 – 21:15:00	06:00:00 – 19:15:00
Off Book/On Exchange Trade Report submission:	03:10:00 – 20:15:00 (with publication only of deferred trades up to 22:15:00)	03:10:00 – 20:15:00 (with publication only of deferred trades up to 22:15:00)	07:15:00 – 17:15:00 (with publication only of deferred trades up to 19:15:00)
OTC and SI Trade Report submission	03:10:00 – 21:15:00	03:10:00 – 21:15:00	06:00:00 – 19:15:00
Trade Report publication: OTC and SI trades	03:10:00 – 21:15:00	03:10:00 – 21:15:00	06:00:00 – 19:15:00

Trade reports will be rejected if received outside the operational hours.

The operational hours will be kept under review following further consultation with clients and regulators.

1.6 Product identifiers

TRADEcho supports two product identification types:

- LSE ID
- ISIN

LSE IDs and ISINs can be used for all asset classes.

1.6.1 LSE ID

Unique instrument ID assigned to the product by the exchange. If LSE ID is used, it must be present in the reference data universe made available that morning. Invalid or unknown LSE IDs received will result in a rejection.

When using the LSE ID, the client must send:

- Tag 22 (**SecurityIDSource**) = **8** (Exchange Symbol)
- Tag 48 (**SecurityID**) = LSE ID

Note: Based on regulatory guidance the actual traded price and currency will be published therefore, Tag 15 (**Currency**) and Tag 31 (**LastPx**) represent actual traded values, they do not reflect the exchange traded currency of the instrument. This is a change from the previous TRADEcho specification.

1.6.2 ISIN

The service supports ISINs for all asset classes (including OTC Derivatives) and all flows. The ISIN universe of instruments for APA publication consists of all that have been classed as ToTV (*Traded on a MiFID II Trading Venue*) in time for inclusion in the morning reference data refresh.

Where unknown ISINs are received on trade reports, they are regarded as out of scope on the basis of not being in the ToTV universe.

When using ISIN to identify products, the client must send:

- Tag 22 (**SecurityIDSource**) = **4** (ISIN)
- Tag 48 (**SecurityID**) = ISIN code

Optionally the client can send the following fields (to assist with identifying a unique instrument for ISINs that have multiple country and currency listings):

- Tag 15 (**Currency**)—Traded currency
- Tag 470 (**CountryOfIssue**)—ISO country code.

Note: The search technique for locating the correct instrument is to start with just the ISIN and then try combinations with **CountryOfIssue and Currency** until only one result is found. E.g. if a single row is returned from using just the ISIN and **CountryOfIssue**, the **Currency** will not be used. If, after all 3 are used, multiple rows are returned, the instrument with lowest Instrument ID (SecurityIDSource = 8) will be selected.

1.7 Transparency reference data

1.7.1 LSEG Reference data

The Reference Data Service provides instrument reference data to participants for products that can be traded on or off book on the LSEG markets in a *flat file* format. This data is made available via FTP/SFTP, full details of the interface are specified in *MIT401 – Guide to Reference Data Services*.

In addition to the flat file a subset of reference data is available via the Market Data feed each morning.

1.8 Currency

The **Currency** (15) published by the APA should be that in which the trade was transacted.

Valid values are ISO-4217 Currency list plus:

Value	Meaning
EUX	Euro Cents
GBX	GB Pennies
USX	US Cents
ZAC	South African Cents (1/100th of a Rand)

Note: Any trade report submitted with currency ITL (Italian Lira) or HRK (Croatian Kuna) is rejected.

For Trade Reports published in ECEU APA, minor currencies are converted to its respective major currencies. Therefore, Price published has a proportionate impact of 1/100th of the submitted price.

1.9 Timestamps

Under MiFID II timestamps for all on venue trades have a granularity level up to **1** microsecond. For off-venue trades, the requirement is to have this to the nearest second.

The formats supported by TRADEcho in all timestamps are

Second granularity: YYYYMMDD-HH:MM:SS

Millisecond granularity: YYYYMMDD-HH:MM:SS.sss

Microsecond granularity: YYYYMMDD-HH:MM:SS.ssssss

Date: YYYYMMDD.

All timestamps sent to TRADEcho shall be in UTC.

1.10 Pricing

1.10.1 Notation and Number of Decimals

The TRADEcho service supports up to 19 numeric characters in the price (and quantity) fields. This could be a combination of integers and decimals including the decimal point. Hence the price can carry a maximum of 17 decimal places (first two characters used for an integer and the decimal point) Every where else the maximum number of characters allowed are mentioned in line in each message field.

1.10.2 Pending Price and No Applicable Price

TRADEcho supports pending price and No Applicable Price by following FIX Protocol recommendations respectively (see https://www.fixtrading.org/packages/ep228/ and https://www.fixtrading.org/packages/ep277-mmt-v4-0/), by using new enumerations for **TradePriceCondition** (1839).. This value is set at the discretion of the client and the price will not be validated when the PNDG/NOAP value is set.

1.11 MiFID II regulatory flags

Subject to further regulatory guidance the expectation is that firms set and publish flags on a trade report when a waiver or deferral has been utilised, not simply because the trade was eligible for the waiver or deferral.

Based on feedback from ESMA, the MMT Technical Committee have produced diagrams to advise on the use of pre-trade waiver flags (MMT Level 3.2) and post-trade deferral flags (MMT Level 4.1). Details can be found here:

https://www.fixtrading.org/packages/mmt-faq-document-v3-01/

1.12 MTF/OTF reporting

TRADEcho APA supports MTF and OTF reporting. The MTF/OTF need to supply their MIC and the appropriate **PartyRole** (MTF/OTF) in the messages. For example messages, see Trade reporting message guide *section*

1.13 Counterparty types and identification codes

LSE Member ID (See LSE Website for lists)

An 8-11 character identification code issued by the LSE for:

- All TRADEcho clients (associated with FIX connectivity via LSE infrastructure as well as client portal permission hierarchy)
- All affiliated LEI's of the client for which the client wishes to submit reports as the executing firm (i.e. **PartyRole** (452) = **1**)
- All counterparts (i.e. **PartyRole** (452) = **17**) of off-book flow taken on exchange
- All counterparts (i.e. **PartyRole** (452) = **17**) where the LSE ID is known and the counterpart wishes to receive drop-copies of the TCR-S (APA)

All TRADEcho clients that are not LSE members will be given a LSE Non-Member ID from the LSE. Additionally, any client of a TRADEcho client that is to receive an assisted report on behalf of the TRADEcho client's submission will also be given a LSE Non-Member ID from the LSE. This allows for distribution via FIX.

LSE ID's are associated within TRADEcho reference data to LEI codes.

For the APA, it is mandatory for the Executing Firm side (**PartyRole** (452) = **1**) either to contain an LSE Member ID or be able to derive the LSE Member ID from the LEI.

LEI (Legal Entity Identifier)

Under MiFID II, all counterparts *should* have an LEI and TRADEcho will validate the LEI and derive the counterpart's SI status.

There are some situations where it is foreseen that clients may not have an accurate LEI for their counterpart for determining the reporting obligation.

MIC code (ISO 10383)

Used to identify MTF\OTF and SI's. This is mandatory when,

- Reporting as an MTF or OTF – should be mentioned in the party block
- Reporting as an SI – should be mentioned in the **SiMic** (25026) field. SIs will need to set up their SI MIC in TRADEcho in line with the ISO Standard.

In case an investment firm wants to report a trade executed on a third country trading venue, the venue MIC should be mentioned in the **LastMkt** (30) field (refer section 4.1)

1.13.1 Counterparty code submission

The table below outlines the counterparty codes required for each trade type.

Trade Type	Executing Firm	Contra Firm	Comments
On-venue off-book	LSE Member ID or LEI that maps to LSE Member ID	LSE Member ID , NONMEMBER01 or LEI that maps to LSE Member ID	When executing a trade on-exchange off-book, under exchange rules the executing firm is required to be an LSE Member firm.
OTC trade report sent to APA	LSE Member ID or LSE Non-Member ID or LEI that maps to one of the above	Optional but LEI is recommended for viewing in portal	The optionality should be viewed in context with above on-venue flow and below assisted reporting flow
Assisted Reporting	The values above can be used to drive the target APA	The values above can be used to drive assisted reporting to the counterpart's APA	LEI is mandatory when submitting an assisted report. The counterparty must be a Non-Member Client of the LSE

1.14 Deferrals

TRADEcho APA will by default identify and apply the maximum available deferral. For OTC and SI trades clients can choose to override the TRADEcho APA deferral and set alternative publication times.

1.14.1 System set deferral

A TCR is set up for system set deferral by setting **TradePublishIndicator** = **2** (Deferred publication requested). If trade is sent with Pending Price, system deferral won't be applied for EQ, but can be set for NEQ when applicable.

1.14.2 Client set deferral

There are two ways for clients to set the deferral period:

- Sending a TCR for system set deferral, with the additional field **DelayToTime** specifying the UTC publication time. This alternative is only allowed for OTC and SI trades.
- Sending a TCR for system set deferral, and at the desired publication time sending in a Prerelease TCR, i.e. a TCR that specifies the original report with **TradeID** and has **TradeReportTransType** = **3** (Release)

1.14.3 Publication time

The system will specify the intended publication time on the TCR-S messages in the field **RptTime** (7570).

1.15 Packages

TRADEcho expects a TCR-C message for each trade component of a MiFID II defined package; it does not require a separate message that represents the package as a whole. Package components will be identified by the presence of:

- A common package identifier—**PackageID** (2489)
- A common count of components—**TotNumTradeReports** (748)
- A component sequence number—**TradeNumber** (2490)

Field **TrdType** (828) = **65** (TPAC) is not used to identify a package trade and will be set automatically by TRADEcho if not present.

Note: TRADEcho system doesn't calculate package trade deferrals and firms are expected to provide deferral details at each component level if the trades in the package are to be deferred.

1.16 Turnover, Quantity and Notional

Turnover is a system set attribute, the transaction size calculated by the system.

Turnover = Price * Quantity

Turnover is only populated for Equity, Equity-Like or ETCs/ETNs. This attribute remains blank for Non Equity trades.

Quantity – When Equity, Equity-Like or ETCs/ETNs, the value submitted in this field is multiplied by the value submitted in the field Price to obtain the size of the trade (Turnover) and apply any potential deferral

Notional – When Non-Equity, the value submitted in this field is used to apply any potential deferral.

Quantity in measurement unit – When the sub asset class is any of the Emission Allowances and Emission Allowance Derivatives, the value submitted in this field is used to apply any potential deferral.

To apply any potential EQ waivers/deferrals we use Turnover and to apply any potential NEQ waivers/deferrals we use Notional or Quantity in measurement unit based on the sub asset class.

1.17 HELD Trades

TRADEcho has introduced a new functionality to manage trades with abnormal prices. These trades, which breach a higher threshold, will be 'HELD' for further scrutiny. Instead of being automatically rejected, these trades will be held for manual review by the LSEG market supervision team.

When a trade is **HELD**, clients are expected to contact LSEG Market Supervision via mktsrvsmarketmonitoring@lseg.com. The clients will be notified of the trade being HELD via the TCR-ACK (TrdRptStatus(939) = Held (4)) and the action to be taken in the text field (58) of the TCR-ACK.

Any trade that remains in the HELD state by the end of the day (pre-close) without being actioned upon will be rejected by the system. A TCR-Ack will be sent with TrdRptStatus(939) = 1 (Rejected).

A trade in HELD state is not amendable. Clients can opt to cancel HELD trades, which will then be marked as HELD CANCELLED where further actions are not allowed on such trades.

Note: *For further information on HELD trades please refer APA User Guide*

2 FIX session layer

The session layer describes how FIX sessions are established and maintained.

Sessions support FIX v.5.0 and also FIX v.4.2/v.4.4.

Clients request a **SenderCompID** (49) using the TRADEcho portal.

2.1 Connecting to the FIX server process

A FIX session is established by sending a logon message and is always initiated by the FIX client and accepted by the FIX server process. The FIX session is established between two parties, called sender and target. The parties are represented by the following tags in StandardHeader:

- **SenderCompID** (49)—the party initiating the session
- **TargetCompID** (56)—the acceptor of the session
- **TargetCompID** (56): TRADEcho APA *(TRADECHO)*

All FIX sessions must be authorized. When the FIX gateway receives a logon message at connection start, the session is authorized using the following:

- **SenderCompId** (49) - must contain the FIX User ID as set up by the client in the TRADEcho portal. For details on accessing the portal please refer to the TRADEcho connectivity guide
- **Password** (554)—must contain the password

Each FIX client must keep lists of FIX gateways and their IP addresses. If a contribution gateway cannot be reached, a client should wait 5 seconds, then try to connect to the next contribution gateway in the list.

If the server receives a connection attempt from a **SenderCompID**, while a session is already established with the same **SenderCompID**, the second TCP/IP connection attempt will be broken. There will not be any reject or logout message. The server will **NOT** increment the next inbound message sequence number expected from the client.

2.2 Lost connection

When reconnecting, the subscriber should login again to the session by using the next transmitted sequence numbers. In the event that the sequence numbers are out of synch, the subscriber should send a resend request to retransmit any potentially lost data.

2.3 Message validation

If a FIX message is not in a correct fix message format, i.e. the <TagNum> is not of the int DataType (ASCII characters “0” to “9”, leading zeroes are not allowed), the whole message is considered as garbage and discarded by the FIX server without any response/reject message.

2.4 Reject handling

TRADEcho utilizes three levels of rejections that can occur before a TCR-S is sent. The message types used are:

- Reject (**MsgType** = **3**)
- BusinessMessageReject (**MsgType** = **j**)
- TradeCaptureReportAck (**MsgType** = **AR**)

2.4.1 Level 1—Reject (3)

The Reject message is used when a message is received but cannot be properly processed due to a session level rule violation. Here are some examples:

- A message lacking a mandatory tag;
- A message with an incorrect value for a specific tag;
- A tag without a value;
- Unknown message type;
- A tag appears more than once.

TRADEcho will not reject messages for having invalid tags (i.e. SessionRejectReason 2 or 3), instead TRADEcho ignores any tags that are not covered by the services.

Apart from key fields in repeating groups, and certain fields in the message header and trailer, TRADEcho does not require tags to be in a particular order.

2.4.2 Level 2—BusinessMessageReject (j)

The BusinessMessageReject is used for covering second level validation failures, including when a message is lacking conditionally mandatory tags or when the FIX gateway is open but the requested service is closed.

2.4.3 Level 3—TradeCaptureReportAck (AR)

Third level validation failures are covered by TradeCaptureReportAck, which include price and quantity validation errors, erroneous member identifiers, member not eligible for service etc.

2.5 Message rate throttling

All the messages sent by a SenderCompID will be sent to a message queue (each SenderCompID will have its own queue). There will be a lower and an upper watermark for the number of messages maintained in the queue. These watermarks will be the same for all FIX users (SenderCompIDs).

The time each message remains in the queue and the number of messages remaining in the queue depends on the performance of the FIX gateway. If the FIX gateway processes messages in the same speed as the messages are sent by the clients then there won't be any messages remaining in the queue. However, if the clients sends in messages faster than the gateway can process them, then the messages will start getting added to the queue.

If this continues without the client slowing down, then the number of messages in the queue may breach the upper watermark of the queue. Once the number of messages in the queue equals the upper watermark limit, the TCP connection for this SenderCompID will be suspended (i.e the socket will be buffered/suspended) and any new messages by the client will not reach the FIX gateway.

2.6 Session message details

2.6.1 Logon

The logon message authenticates a user establishing a connection to a remote system. The logon message must be the first message sent by the session initiator.

If the logon request is rejected, a logout message is sent back with the reason for the rejection in the <Text (58)> field and the TCP/IP session is terminated by FIX Gateway.

On some occasions a silent disconnect is used as to protect unauthorized access attempts from obtaining information.

Logon (A)

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = A (Logon)
98	EncryptMethod	Y	The method of encryption. Always 0=None
108	HeartBtInt	Y	Indicates the heartbeat interval in seconds
141	ResetSeqNumFlag	N	Indicates whether the client and server should reset sequence numbers. Absence of this field is interpreted as Do Not Reset Sequence Numbers (N). Value: Y – Meaning: Yes, reset sequence numbers Value: N – Meaning: No
554	Password	Y	The password assigned to the CompID. Required if the message is generated by the client. New Passwords should be configured and managed via the TRADEcho portal.
925	NewPassword	N	New Password or passphrase.
1409	SessionStatus	C	Status of the FIX session or the request to change the password. Required if the message is generated by the server Value: 0 – Meaning: Session Active Value: 1 – Meaning: Session password changed Value: 3 – Meaning: New password does not comply with policy

1137	DefaultApplVerID	Y	The default version of FIX messages used in this session. Value: 9 — Meaning: FIX50SP2
	StandardTrailer	Y	

2.6.2 Heartbeat

During periods of message inactivity, FIX applications will generate Heartbeat messages at regular time intervals. The heartbeat monitors the status of the communication link and identifies incoming sequence number gaps.

When logging on, the client requests a heartbeat interval, using the `HeartBtInt` tag (see the logon message). Heartbeats must be sent in both directions:

- FIX Gateway sends Heartbeat requests at the requested interval, unless other messages are sent.
- The FIX client must send Heartbeat requests at the requested interval, unless other messages are sent.
- Too frequent Heartbeat interval might result in a disconnect in case of a general network glitch, causing the client to miss two consecutive Heartbeats.

Heartbeat (0)

The Heartbeat monitors the status of the communication link and identifies when the last of a string of messages was not received.

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 0 (Heartbeat)
112	TestReqID	C	Required when the heartbeat is the result of a Test Request message
	StandardTrailer	Y	

2.6.3 TestRequest

TestRequest (1)

The test request message forces a heartbeat from the opposing application.

The test request message checks sequence numbers or verifies communication line status. The opposite application responds to the Test request with a Heartbeat containing the **TestReqID**.

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 1 (TestRequest)
112	TestReqID	Y	Identifier for the request
	StandardTrailer	Y	

2.6.4 ResendRequest

The resend request is sent to initiate the retransmission of messages.

This function is utilized if a sequence number gap is detected, if the receiving application lost a message, or as a function of the initialization process. A resend request from client is always responded to. When a sequence gap is identified, it will be sent along with Sequence Reset message(s) in Gap Fill mode (123=Y) and it replaces all the administrative messages.

ResendRequest (2)

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 2 (ResendRequest)
7	BeginSeqNo	Y	
16	EndSeqNo	Y	
	StandardTrailer	Y	

2.6.5 Reject

Reject (Session Level) (3)

The reject message should be issued when a message is received but cannot be properly processed due to a session-level rule violation.

An example of when a reject may be appropriate would be the receipt of a message with invalid basic data which successfully passes de-encryption, CheckSum and BodyLength checks.

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 3 (Reject)
45	RefSeqNum	Y	MsgSeqNum(34) of rejected message
371	RefTagID	N	If a message is rejected due to an issue with a particular FIX field, its tag number will be indicated.
372	RefMsgType	N	MsgType (35) of the rejected message

373	SessionRejectReason	N	1 = Required Tag Missing 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType 13 = Tag appears more than once 14 = Tag specified out of required order 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating group 18 = Invalid/Unsupported Application Version 99 = Other
58	Text	N	Text specifying the reason for the rejection. (For reject 373=9, this field will indicate the incorrect CompID (Sender or Target))
	StandardTrailer	Y	

2.6.6 BusinessMessageReject

The BusinessMessageReject message can reject an application-level message that fulfils session-level rules but can be rejected without being validated against the specific message type's rules.

BusinessMessageReject (j)

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = j (BusinessMessageReject) (Note – j should be lower case)
45	RefSeqNum	Y	MsgSeqNum of rejected message
372	RefMsgType	Y	The MsgType of the FIX message being referenced.
371	RefTagID	Y	If a message is rejected due to an issue with a particular field its tag number will be indicated.
379	BusinessRejectRefID	N	Client specified identifier (e.g. Firm Trade ID) of the rejected message if it is available.
380	BusinessRejectReason	Y	4: Application not available 5: Conditionally required field missing 0: Other

58	Text	N	Where possible, message to explain reason for rejection
	StandardTrailer	Y	

2.6.7 Sequence reset

Sequence numbers are reset daily. Sequence numbers can also be modified intra-day, where the reset functionality has different modes:

- Gap Fill Mode—used as the response to a Resend request and
- Reset Mode—used to reset the sequence number after an unrecoverable application failure.

A sequence reset—Reset Mode—can only increase the sequence number.

Sequence reset (4)

The sequence reset message is used by the sending application to reset the incoming sequence number on the opposing side.

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 4 (SequenceReset)
123	GapFillFlag	N	The mode in which the message is being used. Absence of this field is interpreted as Sequence Reset (N) Value: Y — Gap Fill Value: N — Sequence Reset
36	NewSeqNo	Y	
	StandardTrailer	Y	

2.6.8 Logout

The logout message initiates or confirms the termination of a FIX session. FIX clients should terminate their sessions gracefully by logging out.

Logout (5)

Tag	Name	Reqd	Comment
	StandardHeader	Y	35 (MsgType) = 5 (Logout)

1409	SessionStatus	C	Status of the FIX session. Required if the message is generated by the server. Value: Meaning 4: Session logout complete 6: Account locked 7: Logons are not allowed at this time 100: Other 101: Logout due to session level failure 102: Logout by market operations 104: Application not available
58	Text		
	StandardTrailer	Y	

2.6.9 StandardHeader

The standard FIX message header.

Tag	Name	Reqd	Comment
8	BeginString	Y	FIXT.1.1 (Always unencrypted, must be first field in message)
9	BodyLength	Y	Number of characters after this field up to and including the delimiter immediately preceding the CheckSum (Always unencrypted, must be second field in message)
35	MsgType	Y	(Always unencrypted, must be third field in message)
1128	ApplVerID	C	Version of FIX used. Required if the message is generated by the server. Value: Meaning 9: FIX50SP2
49	SenderCompID	Y	(Always unencrypted)
56	TargetCompID	Y	(Always unencrypted)
115	OnBehalfOfCompID	N	This field is ignored by the system. Not echoed back in TCR-S
128	DeliverToCompID	N	This field is ignored by the system. Not echoed back in TCR-S
34	MsgSeqNum	Y	
50	SenderSubID	N	This field is ignored by the system. Not echoed back in TCR-S

57	TargetSubID	N	This field is ignored by the system. Not echoed back in TCR-S
116	OnBehalfOfSubID	N	This field is ignored by the system. Not echoed back in TCR-S
144	OnBehalfOfLocationID	N	This field is ignored by the system. Not echoed back in TCR-S
129	DeliverToSubID	N	This field is ignored by the system. Not echoed back in TCR-S
145	DeliverToLocationID	N	This field is ignored by the system. Not echoed back in TCR-S
43	PossDupFlag	N	Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request. Value: Y – Possible Duplicate; N – Original Transmission
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number. Value: Y – Possible Resend; N – Original Transmission
52	SendingTime	Y	
122	OrigSendingTime	C	Time the message was originally transmitted when PossDupFlag (43) is set to Y. If the original time is not available, this should be the same value as SendingTime (52). Required if PossDupFlag (43) is Possible Duplicate (Y)
369	LastMsgSeqNumProcessed	N	The last MsgSeqNum value received by the FIX engine and processed by downstream application, such as trading system or order routing system. Can be specified on every message sent. Useful for detecting backlog with a counterparty.

2.6.10 StandardTrailer

The standard FIX message trailer.

Tag	Name	Reqd	Comment
93	SignatureLength	C	Required when trailer contains signature.
89	Signature	N	

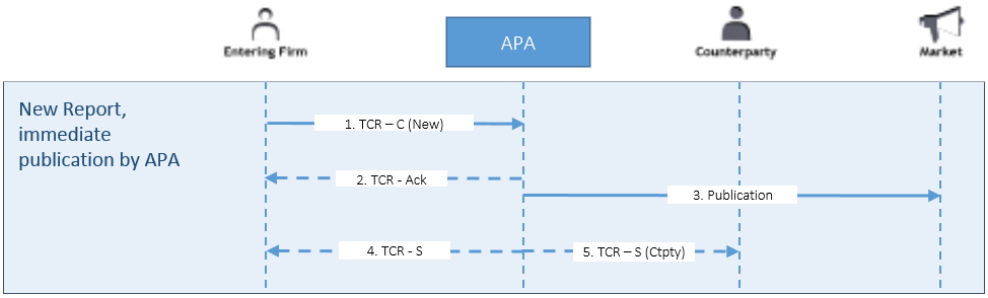
10	CheckSum	Y	(Always unencrypted, always last field in message)

3 APA message flows

3.1 Messaging flows

3.1.1 New, amends, cancels

Immediate APA publication



1. Submitting firm sends a TCR-C to TRADEcho, either with
   - **TradePublishIndicator** (1390) = **1** (Immediate Publication), or
   - **TradePublishIndicator** (1390) = **2** (Deferred Publication Requested) and the system does not deem the trade to be eligible for deferral
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA publishes the trade (time = **T**)
4. TRADEcho APA sends a TCR-S to the entering firm with enriched fields including

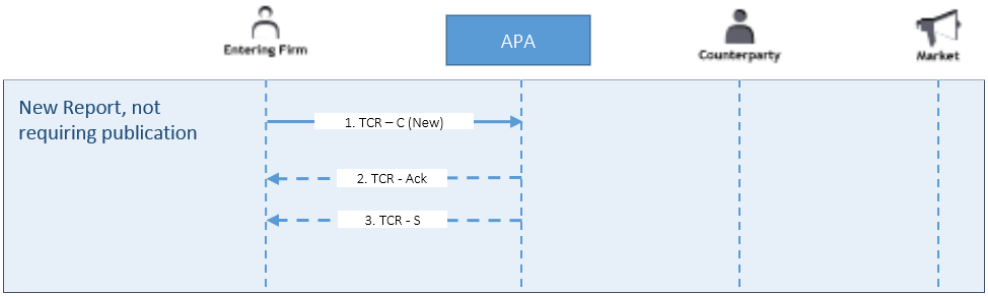
   TradeReportTransType (487) = **2** (Replace)

   RptTime (7570) = **T**
5. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **0** (New)

   RptTime (7570) = **T**

Trade does not require publication

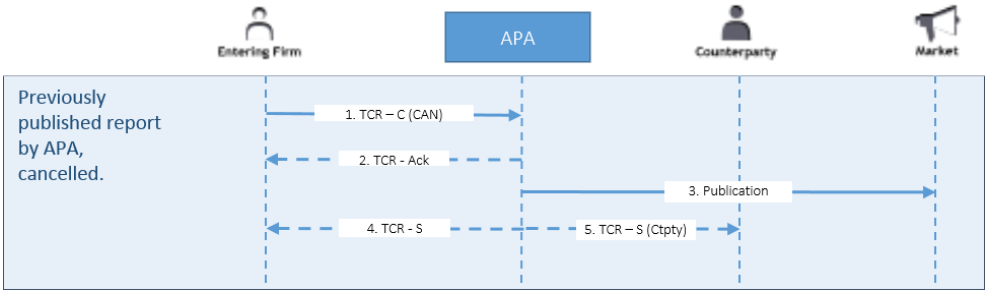


1. Submitting firm sends a TCR-C to TRADEcho APA with **TradePublishIndicator** (1390) = **0** (Do Not Publish)
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA sends a TCR-S to submitting firm with enriched fields

Previously published report cancelled

When cancelling trades, the **TradeID** that the APA assigned the original trade needs to be specified. The message should also be populated with the

cancellation instruction (**TradeReportTransType** = **1**) along with the mandatory fields for the TCR-C (including but not limited to the fields specified in the example flow below).



1. Submitting firm sends a TCR-C with **TradeReportTransType** (487) set **1** (cancel)
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA publishes the cancellation
4. TRADEcho APA sends a TCR-S to the entering firm with enriched fields including

   TradeReportTransType (487) = **2** (Replace)

   ExecType = **H** (Trade Cancel)
5. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

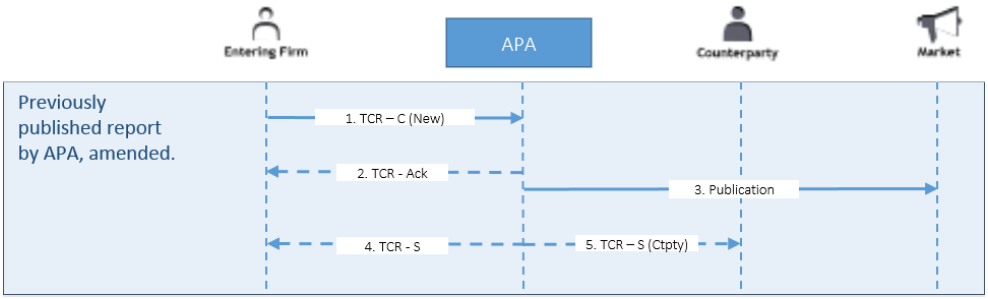
   TradeReportTransType (487) = **1** (Cancel)

   ExecType = **H** (Trade Cancel)

Note: If the Trade Report is older than 30 days, the cancel request is considered to be a Late Cancel request. For this case, the APA requires a full set of attributes and the Trade Report is validated as a new trade submission.

Amendment to previously published trade

Amendments are handled by sending a cancellation message followed by a new message (TCR-C with **TradeReportTransType** = **0**). To link the amended trade report to the original, the Transaction Identification Code of the trade being amended is required to be specified in **OrigTradeID**.



Step 1: Previously published report cancelled (See separate messaging flow)

Step 2: Amend

1. Submitting firm sends a TCR-C with

   TradeReportTransType (487) = **0** (New)

   OrigTradeID = **XYZ123** (TradeID of the original trade report).
2. TRADEcho APA sends a TCR-Ack to submitting firm with a new Transaction ID

TradeID = **XYZ456**

3. TRADEcho APA publishes the amendment
4. TRADEcho APA sends a TCR-S with **TradeReportTransType** (487) = **2** (Replace)
5. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **0** (New)

   TradeID = **XYZ456**

3.1.2 Deferrals

TRADEcho APA can identify and apply the maximum available deferral. This service is requested by setting **TradePublishIndicator** = **2** (Deferred Publication Requested) on the TCR. If **TradePublishIndicator** = **1** (Immediate Publication) is set the trade will be published immediately regardless of if it is eligible for deferral.

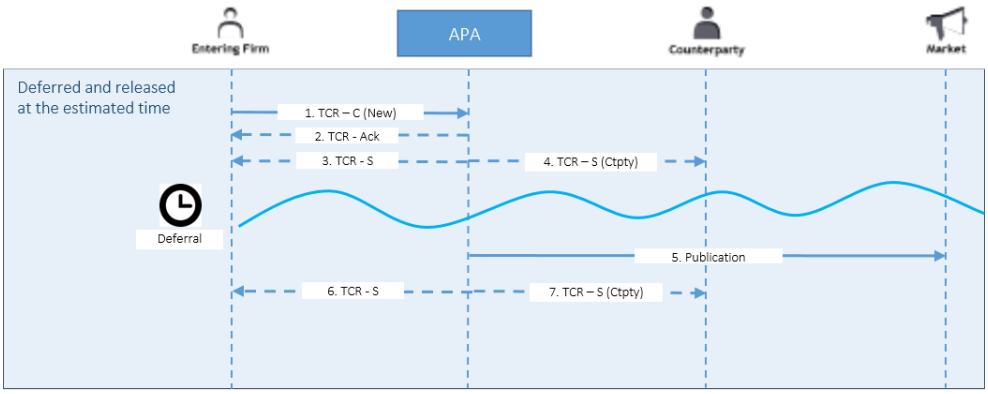
Clients can choose to override the TRADEcho APA deferral and set alternative publication times. There are two ways for clients to set the deferral period

1. Sending a TCR with **TradePublishIndicator** (1390) = **2**, with the additional field **DelayToTime** specifying the UTC publication time.
2. Sending a TCR with **TradePublishIndicator** (1390) = **2**, and at the desired publication time sending in a Pre-Release TCR, i.e. a TCR that specifies the original report with **TradeID** and has **TradeReportTransType** (487) = **3** (Release).

Publication time

The system will specify the intended publication time on the TCR-S messages in the field **RptTime** (7570). This same field is used for specifying the actual publication time after a trade report has been published.

New trade requesting deferred publication by APA



1. Submitting firm sends a TCR-C with **TradePublishIndicator** (1390) = **2** (Deferred Publication Requested)
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA calculates that the trade report is eligible for deferral to time T and sends a TCR-S signifying the report has been deferred with

   TradeReportTransType (487) = **2** (Replace)

   RptTime = **T**

4. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

TradeReportTransType (487) = **0** (New)

RptTime = **T**

5. TRADEcho APA publishes the trade
6. TRADEcho APA publishes a TCR-S to submitting firm signifying that the trade has been released for publication with:

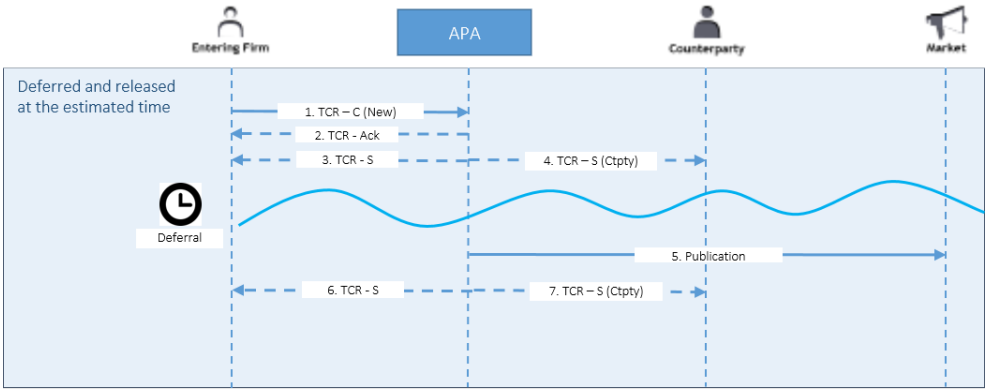
   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time
7. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time

New trade requesting a specific deferral



1. Submitting firm sends a TCR-C requesting publication on **T** with

   TradePublishIndicator (1390) = **2** (Deferred Publication Requested)

   DelayToTime = **T**
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA sends a TCR-S signifying the report has been deferred with

   TradeReportTransType (487) = **2** (Replace)

   RptTime = **T**
4. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **0** (New)

   RptTime = **T**
5. TRADEcho APA publishes the trade
6. TRADEcho APA publishes a TCR-S to submitting firm signifying that the trade has been released for publication with:

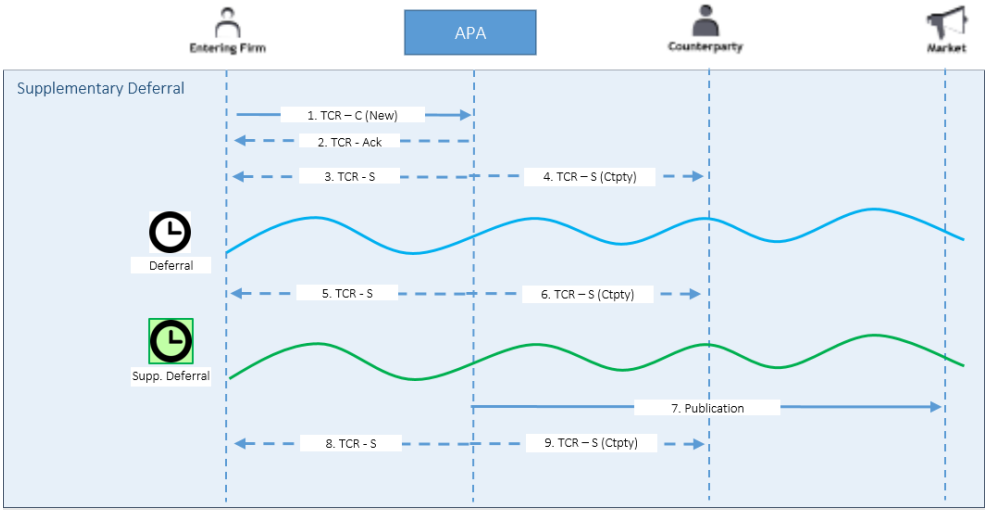
   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time
7. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time

New trade into APA requiring supplementary deferred publication



1. Submitting firm sends a TCR-C with **TradePublishIndicator** (1390) = **2** (Deferred Publication Requested)
2. TRADEcho APA sends a TCR-Ack to submitting firm
3. TRADEcho APA calculates that the trade report is eligible for deferral to time **T** and sends a TCR-S signifying the report has been deferred with

   TradeReportTransType (487) = **2** (Replace)

   RptTime = **T**
4. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **0** (New)

   RptTime = **T**
5. TRADEcho APA calculates that the trade report is eligible for a supplementary deferral to time **T** and sends a TCR-S signifying the report has been deferred with

   TradeReportTransType (487) = **2** (Replace)

   RptTime = **T**
6. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **0** (New)

   RptTime = **T**
7. TRADEcho APA publishes the trade
8. TRADEcho APA publishes a TCR-S to submitting firm signifying that the trade has been released for publication with:

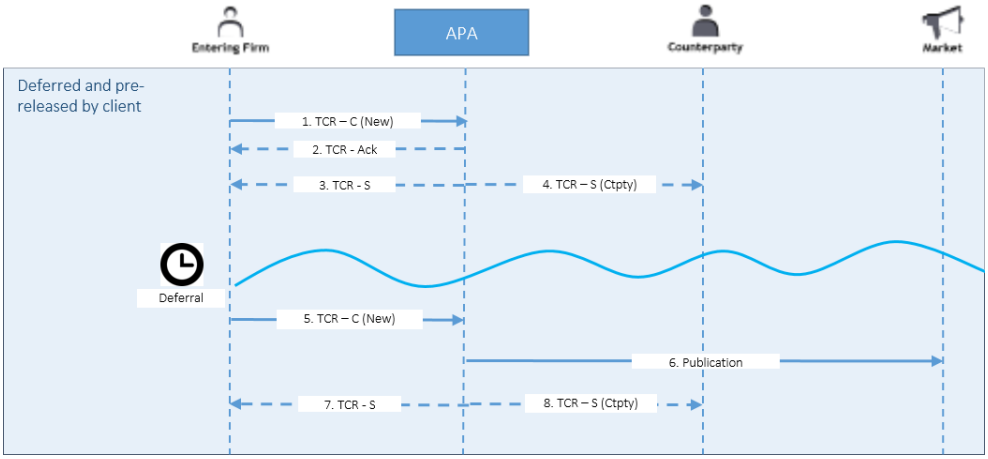
   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time
9. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time

Pre-release of a deferred trade



1. Submitting firm sends a TCR-C with **TradePublishIndicator** = **2** (Deferred Publication Requested)
2. TRADEcho APA sends a TCR-Ack to submitting firm with **TradeID** = **XYZ123**
3. TRADEcho APA calculates that the trade report is eligible for deferral to time **T2** and sends a TCR-S signifying the report has been deferred with

   TradeReportTransType = **2** (Replace)

   RptTime = **T2**
4. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType = **0** (New)

   RptTime = **T2**
5. Before the deferral time the submitting firm sends a TCR-C releasing the trade with

   TradeReportTransType (487) = **3** (Release)

   TradeID = **XYZ123**
6. TRADEcho APA publishes the trade
7. TRADEcho APA publishes a TCR-S to submitting firm signifying that the trade has been released for publication with:

   TradeReportTransType (487) = **3** (Release)

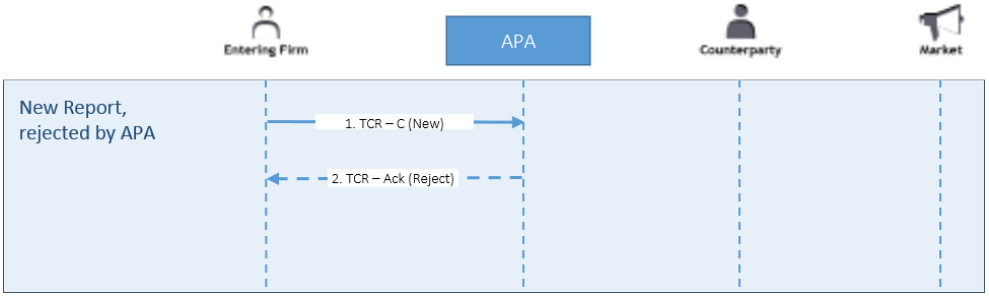
   RptTime = The actual publication time
8. If the counterparty firm is an LSE Member and is specified on the trade report, it gets a TCR-S with

   TradeReportTransType (487) = **3** (Release)

   RptTime = The actual publication time

3.1.3 Exceptions and rejections

Trade rejected by TRADEcho APA



1. Submitting firm sends a TCR-C
2. Depending on type of rejection, the submitting firm receives one of the following
   - Reject (message type 3) with
     SessionRejectReason (373) = Error code
     Text (58) = Error description
   - BusinessMessageReject (message type j) with
     BusinessRejectReason (380) = Error code
     Text (58) = Error description
   - TradeCaptureReportAck (message type AR) with
     TrdRptStatus (939) = **1** (Rejected)
     TradeReportRejectReason (751) = Error code
     RejectText (1328) = Error description
     TradeID (1003) = Transaction identification code

Note: Only the TradeCaptureReportAck provides a **TradeID**.

4 APA trade report message details

The following sections cover the supported APA trade report messages.

The trade reporting model supported in the system is single-sided trade reporting. In the single sided reporting model, one of the parties reports the trade and optionally includes the counterparty details in the Trade Capture Report.

4.1 TradeCaptureReport – MsgType "AE" – Client to APA

The client initiated Trade Capture Report message (TCR-C) is a trade report or an instruction on a trade report that is sent from clients to TRADEcho APA. It is used to:

- Report OTC and SI trades.
- Move off-book trades on-exchange.
- Report trades carried out on MTF and OTF's
- Cancel trade reports.
- Amend trade reports.
- Release deferred trade reports for publication.

Tag	Field	Description	Data Type	ESMA/FCA	Reqd
	StandardHeader	35 (MsgType) = AE (TradeCaptureReport)			Y
1003	TradeID	Server-assigned id. Populated when referring to a previously submitted trade. This ID is the Transaction ID as stipulated by ESMA. Required when TradeReportTransType(487) is either 1, or 3.	String	Transaction Identification Code	C
1041	FirmTradeID	Trade Identifier assigned by the entering firm. TRADEcho will not validate uniqueness. Updatable field. Required when TradeReportTransType(487) = 0 (New)	String (50)		C
1042	SecondaryFirmTradeID	Used to carry an internal firm assigned ID. TRADEcho will not validate uniqueness. Updatable field.	String (50)		N
1126	OrigTradeID	Required when amending, otherwise optional for display in client portal for referencing the original TradeID.	String		C

25011	TargetAPA	Target APA if deemed eligible for publication. Current options: ECHO (LSE UK), ECEU (LSE EEA) Default: ECHO Target APA is not amendable.	String		N
25022	AssistedReportAPA	1 = Publish as an assisted report on behalf of the counterpart 2 = Do not publish as an assisted report Default: 2	int		N
22	SecurityIDSource	4 = ISIN 8 = Exchange symbol LSE ID	String	Instrument identification code type	Y
48	SecurityID	ISIN when SecurityIDSource = 4 ISIN LSE ID when SecurityIDSource = 8 LSE ID	String	Instrument Identification Code	Y
470	CountryOfIssue	ISO 3166 2-character country code. Specifies the country in which the instrument was issued. When SecurityIDSource (22) = 4 (ISIN) • Recommended for equity products	String (2)	ISO 3166 2-character code.	N
15	Currency	Traded currency. ISO 4217 three-letter currency code. (additional values GBX, ZAC, refer to Currency section – 1.7) Required when TradeReportTransType = 0 (New) Not required for TradeReportTransType <> 0 or New trade with PNDG/NOAP flag and TargetAPA<>ECHO or PriceType (423) is not Per Unit (2)	String (3)	Price currency	C
32	LastQty	Quantity of the trade Required when TradeReportTransType(487) = 0 (New) only for Equity and Equity-Like trade reports or if TargetAPA is ECHO. Can be left blank or 0 for Non-Equity trade reports if TargetAPA is ECEU. The number of units of the financial instrument, or the number of derivative contracts in the transaction. Unit of measurement in QtyType When Equity and Equity-Like, the value submitted in this field is multiplied by the value submitted in the field Price to obtain the size of the trade (Turnover) and apply any potential deferral/waivers.	String	Quantity	C

854	QtyType	0= units (shares, par, currency) - default 1= contracts 2= units of measure	int		N
231	ContractMultiplier	Specifies the ratio or multiply factor to convert from "nominal" units (e.g. contracts) to total units (e.g. shares) (e.g. 1.0, 100, 1000, etc). Applicable for Fixed Income, Convertible Bonds, Derivatives, etc. In general quantities for all classes should be expressed in the basic unit of the instrument, e.g. shares for equities, nominal or par amount for bonds, currency for foreign exchange.	float		N
31	LastPx	Price of the trade. If monetary, it is expressed as the traded currency Required when TradeReportTransType(487) = 0 (New), unless TradePriceCondition (1839) = 17 (PNDG) or (1839 = 18 (NOAP)	Price	Price	C
423	PriceType	Price notation 2 = Per Unit (Default) 1 = Percentage 9 = Yield 22 = Basis Points If not presented, this field will remain blank and not be defaulted in case TradePriceCondition (1839)=PNDG/NOAP	int	Price Notation	N
25014	NotionalAmount	Notional amount. Required when instrument is non-equity or non-equity like (i.e. covered by RTS 2 only) When Non-Equity, the value submitted in this field is used to apply any potential deferral/waivers	float	Notional amount	N

25015	NotionalCurrency	Notional currency. Defaults to Currency (15). ISO 4217 three-letter currency code. In the case of an interest rate or currency derivative contract, this will be the notional currency of leg 1 or the currency 1 of the pair. In the case of swaptions where the underlying swap is single-currency, this will be the notional currency of the underlying swap. For swaptions where the underlying is multicurrency, this will be the notional currency of leg 1 of the swap. In case of trades with NOAP/PNDG flag and Currency (15) field blank, Notional Currency also remains blank. Mandatory in case Currency (15) is kept blank	Currency	Notional currency	N
996	UnitOfMeasure	Notation of the quantity in measurement unit of the underlying commodity upon which the contract is based. Supported values: Alw, Bbl, Bcf, BDFT, Bu, CBM, Ccy, CDD, CER, CPD, CRT, cwt, day, dt, EnvAllwnc, EnvCrd, EnvOfst, g, Gal, GJ, GT, HDD, IPNT, kg, kL, kM, kW_a* (kW-a), kW-a, kW_d* (kW-d), kW-d, kW_h* (kW-h), kW-h, kW_M* (kW-M), kW-M, kW_min* (kW-min), kW-min, kWh, L, lbs, M, mi, mL, mM, MMbbl, MMBtu, MW_a* (MW-a), MW-a, MW_d* (MW-d), MW-d, MW_h* (MW-h), MW-h, MW_M* (MW-M), MW-M, MW_min* (MW-min), MW-min, MWh, oz, oz_tr, pc, PRINC, pt, pt_gb, qt, qt_gb, SqcM, Sqft, Sqin, SqkM, SqM, Sqmi, t, thm, tn, USD *Converted to the value in brackets	String	Notation of the quantity in measurement unit	N
997	TimeUnit	Unit of time associated with the contract H= Hour Min = Minute S = Second D = Day Wk = Week Mo = Month Yr=Year	String		C

1147	UnitOfMeasureQty	Quantity in measurement unit. Required if UnitOfMeasure (996) is specified.	Qty	Quantity in measurement unit	C
25007	EmissionAllowanceType	Emission allowance type. Allowed values Value CERE ERUE EUAA EUAE OTHR	String	Type	N
60	TransactTime	UTC Date and Time the trade was executed. Required when TradeReportTransType = 0 (New)	UTCTimestamp	Trading date and time	C
64	SettlDate	Settlement date Required for On-exchange, off-book trades when TradeReportTransType=0. (MatchType (574) = 3 (Trade Reporting (On Exchange)), VenueType (1430) = O (Off Book) and OnExchangeInstr (25002) = 1 (On Exchange requested))	LocalMktDate		C
25002	OnExchangeInstr	Specifies if the trade is to be moved On-Exchange, and which counterparty will do so. 0 = No On-Exchange requested (default) 1 = On Exchange requested	int		N
1924	ClearingIntention	Specifies the party's or parties' intention to clear the trade 0 = Do not intend to clear (default) 1 = Intend to clear (only accepted for derivatives and securitised derivatives)	int	Transaction to be cleared	N
58	Text	Free text field	String (64)		N
7596	PxQtyReviewed	Field for specifying if the price and quantity validation should be overridden. Y = Yes, override price and quantity validation N = No (Default)	Boolean		N
7552	DelayToTime	Field for specifying the time at which a report should be published by an APA. Ignored if TradePublishIndicator is not 2 (Deferred Publication Requested)	UTCTimestamp		N

2489	PackageID	Unique identifier to be present on all trade components belonging to the package.	String (32)		N
2490	TradeNumber	A sequentially consecutive ordinal number from 1 to TotNumTradeReports (748) that identifies this component within the same PackageID (2489) Conditionally required when PackageID (2489) is specified.	int		C
748	TotNumTradeReports	The total number of component trades expected for any given PackageID (2489) Conditionally required when PackageID (2489) is specified.	int		C
25026	SiMic	The MIC for the SI participating in the trade report submitted to TRADEcho. This can be SI MIC of Executing Member or Counterparty Member which is SI. Required when MatchType (574) is 9 (Systematic Internaliser) and VenueType (1430) is 'O' (Off-book)	String (4)		C

MMT

Tag	Field	Description	Data Type	ESMA/FCA	Reqd
1430	VenueType	Level 1: Market Mechanism B = Central Limit Order Book Q = Quote Driven Market D = Dark Order Book O = Off Book A = Periodic Auction N = Request for Quotes V = Voice negotiation H = Hybrid (For ESMA RTS 1 "other type of trading system") For Off Book trades, O is a required value (Off-book trades -> (MatchType (574) = 3 (Trade Reporting (On Exchange)), 1 (OTC), 9 (SI)))	char		C
574	MatchType	Level 2: Trading Mode 3 = Trade Reporting (On Exchange) 1 = OTC 9 = Systematic Internaliser Required if VenueType is O=Off Book	String	Venue of execution (XOFF and SINT)	C

828	TrdType	Level 3.1: Transaction Category 0 = Standard trade for the Market Mechanism and Trading Mode (Default) 62 = Dark Trade 65 = Package Trade (TPAC) 2 = Exchange for physicals (XFPH) Level 3.11: Transaction Type: Portfolio 50=Portfolio Transaction (PORT) (see section 7.2)	int		N
855	SecondaryTrdType	Level 3.5: BENCHMARK OR REFERENCE PRICE INDICATOR 64 = Benchmark Trade 67 = Market closing price (CLSE) Level 3.11: Transaction Type: Portfolio 50 = Portfolio Transaction (PORT) (see section 7.2) Level 3.12: Transaction Type: Contingent 65 = Contingent Transaction (CONT) (only for RTS1) (see section 7.2) Level 3.13: TRANSACTION TYPE : GIVE-UP 61 = Give-up (GIVE) Required if TertiaryTrdType is supplied	int	BENC PORT CONT CLSE GIVE	C
2896	TertiaryTrdType	Level 3.11: Transaction Type: Portfolio 50 = Portfolio Transaction (PORT) (see section 7.2) Level 3.12: Transaction Type: Contingent 65 = Contingent Transaction (CONT) (only for RTS1) (see section 7.2) Level 3.13: TRANSACTION TYPE : GIVE-UP 61 = Give-up (GIVE)	int	PORT CONT GIVE	N
2963	MultiJurisdictionReportingIndicator	Level 5.2: REPORTING CIRCUMSTANCE: DUPLICATIVE ACROSS JURISDICTIONS Specifies if the trade is a Cross-Border Duplicative Trade (XBDT) 0 = Trade not eligible for multi-jurisdiction reporting (Default) 1 = Trade eligible for multi-jurisdiction reporting	int	XBDT	N
2373	IntraFirmTradeIndicator	Level 5.3: REPORTING CIRCUMSTANCE: INTRA-GROUP Specifies if the trade is a Intra Group Trade (IGRP) Y = Yes N = No (Default)	Boolean	IGRP	N

1115	OrderCategory	Level 3.2: NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER 3 = Negotiated Trade	char		N
829	TrdSubType	Level 3.3: Agency Cross Trade Indicator 37 = Agency Cross trade (ACTX-flag)	int	ACTX	N
487	TradeReportTransType	Level 3.4: Modification Indicator. 0 = New 1 = Cancel 3 = Release	int	CANC AMND	Y
2405	ExecMethod	Level 3.7: Off-book automated/manual 0: Undefined or does not apply (Default) 1: Off Book Non-Automated 2: Off Book Automated	int		N
2667	AlgorithmicTradeIndicator	Level 3.9: ALGORITHMIC INDICATOR 1 = Algorithmic trade 0 = No Algorithmic Trade (Default)	int	ALGO	N
1390	TradePublishIndicator	Level 4.1: PUBLICATION MODE / POST-TRADE DEFERRAL: REASON 0 = Do Not Publish 1 = Immediate Publication 2 = Deferred Publication Requested If unspecified; • If MatchType (574) = 3 (Trade Reporting (On Exchange)) is set in TCR-C, default value for the field TradePublishIndicator (1390) = 1 (Immediate Publication) Applicable for OnExhange Off Book trades. • If MatchType (574) = 1 (OTC) or 9 (SI) is set in TCR-C, default value for the field TradePublishIndicator (1390) = 2 (Deferred Publication Requested)	int	LRGS ILQD SIZE	N

1934	RegulatoryReportType	Level 4.2: POST-TRADE DEFERRAL OR ENRICHMENT: TYPE 11 = LMTF 12 = DATF 13 = VOLO 14 = FWAF 15 = IDAF 16 = VOLW 17 = FULF 18 = FULA 19 = FULV 20 = FULJ 21 = COAF	int	LMTF DATF VOLO FWAF IDAF VOLW FULF FULA FULV FULJ COAF	N
20200	ApplySupplementaryDeferral	Specifies if the trade report should use supplementary deferral if eligible. Y = Yes (Default) N = No	Boolean		N
20201	ExtendedSupplementaryDeferralRegime	Extension of MMT Level 4.2: POST-TRADE DEFERRAL OR ENRICHMENT to support certain special regimes. 101 = DATF Extended Will take precedence over field RegulatoryReportType (1934).	int		N
570	PreviouslyReported	MMT Level 5: Duplicative Indicator Y = Duplicative Trade Report N = Unique Trade Report (Default)	Boolean	DUPL	N
30	LastMkt	Can be used for the last fill or indication of last known routing to a Third Country Trading Venue of Execution. If a trade report is submitted to ECEU APA in conjunction with MatchType (574) = 1 and VenueType (1430) = 'O' for an OTC trade with a MIC which is found in TE Trading Venue MIC List and it is not an SI MIC or EEA RM, MTF or OTF MIC, then the MIC will be published as Third County Trading Venue of Execution. Else, the trade report will be rejected if the MIC is supplied in this field for any non OTC trade report or the MIC is either not found in the TE Trading Venue MIC List or it is an SI MIC or EEA RM, MTF or OTF MIC. The MIC will be ignored and dropped if submitted with TargetAPA=ECHO	Exchange		N

MMT Helper Fields

Tags		Field	Description	Data Type	ESMA/FCA	Reqd
1838		NoTradePriceConditions	The number of trade price conditions. **Used for MMT Levels 3.1, 3.6, and 3.8**	int		N
1838	1839	TradePriceCondition	Level 3.1: TRANSACTION TYPE: TRANSACTION CATEGORY 14 = Price improvement (RPRI) Level 3.6: SPECIAL DIVIDEND INDICATOR 13 = Special dividend trade (SDIV) Level 3.8: ORDINARY/STANDARD TRADES OR TRADES OUTSIDE PRICE FORMATION/DISCOVERY PROCESS 15 = NPFT 16 = TNCP 17 = PNDG Pending Price (see Pending Price*/No Applicable Price in section 1.12.3)* 18 = NOAP No Applicable Price (see NOAP*/ No Applicable Price in section 1.12.3)* Conditionally required when NoTradePriceConditions (1838) is specified.	int	RPRI SDIV NPFT TNCP PNDG NOAP	C
2668		NoTrdRegPublications	Number of regulatory publication rules in repeating group	int		N
2668	2669	TrdRegPublicationType	Used for MMT Levels 3.2, 3.5, and 4.1 0 = Pre-trade transparency waiver 1 = Post-trade deferral Conditionally required when NoTrdRegPublications (2668) is specified.	int		C

2668	2670	TrdRegPublicationReason	**Used for MMT Levels 3.2, 3.5, and 4.1** **Valid values when TrdRegPublicationType(2669)=0:** 0 = No preceding order in book as transaction price set within average spread of a liquid instrument (NLIQ) 1 = No preceding order in book as transaction price depends on system-set reference price for an illiquid instrument (OILQ) 2 = No preceding order in book as transaction price is for transaction subject to conditions other than current market price (PRIC) 3 = No public price for preceding order as public reference price was used for matching orders (RFPT) 4 = No public price quoted as instrument is illiquid (ILQD) 5 = No public price quoted as order is above standard market size (SIZE) 9 = No public price quoted due to LIS (NTLS) 17 = No public price quoted due to usage of a pre-trade transparency waiver (NETW) **Valid values when TrdRegPublicationType(2669)=1:** Only 1 of the following should be selected 6 = Deferral due to "Large in Scale" 7 = Deferral due to "Illiquid Instrument" 8 = Deferral due to "Size Specific"	int	NLIQ OILQ PRIC RFPT LRGS ILQD SIZE NTLS NETW	N

Party and Side Groups

Tags		Field	Description	Data Type	ESMA/FCA	Reqd
552		NoSides	Repeating group for sides. Two sides (Buy and Sell) are mandatory when OnExchangeInstr=1.	NumInGroup		Y
552	54	Side	1 = Buy 2 = Sell 8 = Crossed (Only valid when submitting as an MTF, OTF)	char		Y

552	29		LastCapacity	1 = AOTC (Agent) 2 = AOTC (Cross as Agent) 3 = MTCH (Cross as Principal) 4 = DEAL (Principal) 5 = DEAL (Riskless Principal) Required on the entering firm's side of the trade. Should be omitted on the counterparty side.	char	C
552	625		TradingSessionSubId	Level 2: Trading Mode 2 = Scheduled Opening Auction 4 = Scheduled Closing Auction 6 = Scheduled Intraday Auction 9 = Unscheduled Auction 8 = Undefined Auction 3 = Continuous Trading 5 = At Market Close Trading 10 = Out of Main Session Trading Required on the entering firm's side of the trade if VenueType(1430) is not O=Off Book	String	C
552	1		Account	Client reference info, free text info	String	N
552	581		AccountType	1 = Client 3 = House Optional on the entering firm's side of the trade. Should be omitted on the counterparty side	int	N
552	453		NoPartyIDs	Number of Party Identifiers for the current side of the trade. See Counterparty code submission on section 1.12.1	NumInGroup	Y
552	453	448	PartyID	ID of party *(When 452=12 or 452=117, values exceeding 11 characters are truncated)*	String	Y

	552	453	447		PartyIDSource	C = Generally accepted market participant identifier D = Custom [LSE Member ID] – Mandatory for off-book on exchange flow E = ISO Country Code (two letter ISO 3166 country code) G = MIC N = Legal Entity Identifier	char	Y
	552	453	452		PartyRole	**Entering Side**: 1 = Executing Firm (Required) 12 = Trader ID 75 = Location ID 76 = Desk ID 117=Salesperson ID **Counterparty Side**: 17 = Contra Firm (Required) 55 = Session ID 12 = Trader ID **Side = 8 (Crossed)** 64 = Multilateral Trading Facility (MTF) 73 = OTF	int	Y
	552	453	802		NoPartySubIDs	Number of PartySubID (523) and PartySubIDType (803) entries within the PartySubID group	NumInGroup	N
	552	453	802	523	PartySubID	Required when NoPartySubIDs (802) used (& vice versa) Value specific to type PartySubIDType (803) PartySubIDType (803) = 31 (Location) 0-EEA 1-Third Country 2-UK	String	C
	552	453	802	803	PartySubIDType	Required when NoPartySubIDs (802) used (& vice versa) Type of PartySubID (523) value. 31 = Location	int	C
					StandardTrailer			Y

4.2 TradeCaptureReport – Ack (AR) – APA to Client

The TradeCaptureReport Ack (35=AR) message can be used to:

- Acknowledge trade capture reports received from a client;
- Reject trade capture reports received from a client.

	Tag	Field	Description	Data Type	ESMA/FCA	Reqd
		StandardHeader	35 (MsgType) = AR (TradeCaptureReportAck)			Y
	1003	TradeID	Server-assigned ID. Set by APA.	String		Y
	1041	FirmTradeID	Identifier assigned to the trade by the entering firm. Value copied from the TCR-C.	String		N
	1042	SecondaryFirmTradeID	Value copied from the TCR-C.	String		N
Instrument component	22	SecurityIDSource	Value copied from the TCR-C	String		Y
Instrument component	48	SecurityID	Value copied from the TCR-C	String		Y
Instrument component	470	CountryOfIssue	Value copied from the TCR-C	Country		N
	15	Currency	Value copied from the TCR-C	Currency		Y
	751	TradeReportRejectReason	Populated when TrdRptStatus (939) = 1 (Rejected) Code specifying the reason for the APA rejection 2=Unknown instrument 99=Other – will include system generated RejectText(1328) on the exact error 7004=Unknown Trade ID 7019=Trade already cancelled 7024=Reporting user (SenderComp ID) not allowed to report on executing firm 7502=Not allowed during On Exchange Holiday	int		C
	1328	RejectText	Text specifying the reason for the rejection	String		N

	487	TradeReportTransType	0 = New 1 = Cancel 2 = Replace 3 = Release	int	Y
	939	TrdRptStatus	0 = Accepted 1 = Rejected 4 = Held	int	Y
	58	Text	Value copied from TCR-C. In certain system events (eg: Trade HELD) the value from TCR-C will be overridden with system generated text	String (64)	N
		StandardTrailer			Y

4.3 TradeCaptureReport AE Server Initiated (AE) – APA to Client

The server initiated TradeCaptureReport message (TCR-S) 35=AE is an enrichment message sent from TRADEcho APA to clients and in some circumstances their counterparties. It is used to:

- Send enriched trade report details to the reporting clients and their counterparties;
- Confirm new trade reports and amendments to trade reports.

	Tag	Field	Description	Data Type	ESMA/FCA	Req d
		StandardHeader	35 (MsgType) = AE (TradeCaptureReport)			Y
	1003	TradeID	Server-assigned id set by the APA.	String	Transaction identification code	Y
	571	TradeReportID	Server/ APA assigned identifier of the message. Will be unique for each TCR disseminated from the system during the day	String		Y
	1041	FirmTradeID	Identifier assigned to the trade by the entering firm. Value copied from the TCR-C.	String		Y
	1042	SecondaryFirmTradeID	Value copied from the TCR-C	String		N

	1126	OrigTradeID	Value copied from the TCR-C	String		C
	25012	AggPublicationID	ID set to aggregation group that this trade belongs to.	String		N
	25022	AssistedReportAPA	Value copied from the TCR-C	int		N
	25011	TargetAPA	Value copied from the TCR-C.	String		N
Instrument component	22	SecurityIDSource	4 = ISIN 8 = Exchange symbol LSE ID Value copied from the TCR-C.	String	Instrument identification code type	Y
Instrument component	48	SecurityID	Value copied from the TCR-C.	String	Instrument Identification Code	Y
Instrument component	470	CountryOfIssue	The country of issue of the product. Value copied from the TCR-C.	Country		N
	15	Currency	Identifies the traded currency. Value copied from the TCR-C.	Currency	Price currency	Y
	150	ExecType	Type of execution being confirmed by the system. F=Trade H=Trade Cancel	char		Y
	32	LastQty	Quantity of the trade. Value copied from the TCR-C.	Qty	Quantity	Y
	854	QtyType	QtyType value copied from the TCR-C	int		C
	231	ContractMultiplier	ContractMultiplier value copied from the TCR-C	float		C
	31	LastPx	Price of the trade. Value copied from the TCR-C.	Price	Price	C
	423	PriceType	Price notation. Value copied from the TCR-C	int	Price Notation	Y
	25014	NotionalAmount	Notional amount. Value copied from the TCR-C.	float	Notional amount	N

	25015	NotionalCurrency	Notional currency. Value copied from the TCR-C.	Currency	Notional currency	N
	996	UnitOfMeasure	Notation of the quantity in measurement unit. Value copied from the TCR-C.	String	Notation of the quantity in measurement unit	N
	997	TimeUnit	Value copied from the TCR-C	String		N
	1147	UnitOfMeasureQty	Quantity in measurement unit. Value copied from the TCR-C.	Qty	Quantity in measurement unit	N
	25007	EmissionAllowanceType	The emission allowance type. Value copied from the TCR-C when applicable or can be set by the system.	String	Type	N
	60	TransactTime	UTC Date and Time the trade was executed. Required when TradeReportTransType = 0 (New), 2 (Replace) Value copied from the TCR-C.	UTCTimestamp	Trading date and time	C
	64	SettlDate	Value copied from the TCR-C.	LocalMktDate		N
	25002	OnExchangeInstr	Value copied from the TCR-C.	int		N
	1924	ClearingIntention	Specifies the party's or parties' intention to clear the trade. Value copied from the TCR-C.	int	Transaction to be cleared	N
	58	Text	Value copied from the TCR-C.	String		N
	7596	PxQtyReviewed	Value copied from the TCR-C.	Boolean		N
	7584	TradeReportSystem	Specifies if trade report was submitted/amended/cancelled via GUI, FIX or SRR. 1 = FIX 2 = Web portal 3 = SRR	int		Y
	7552	DelayToTime	Value copied from the TCR-C.	UTCTimestamp		N

	7570	RptTime	The time the system will publish (in case of deferral) or has published the trade.	UTCTimestamp	Publication date and time	N
	2489	PackageID	Value copied from the TCR-C.	String (32)		N
	2490	TradeNumber	Value copied from the TCR-C.	int		C
	748	TotNumTradeReports	Value copied from the TCR-C.	int		C
	25026	SiMic	Value copied from the TCR-C.	String (4)		C

MMT

	Tag	Field	Description	Data Type	ESMA/FCA	Reqd
	1430	VenueType	MMT Level 1: Market Mechanism Value copied from the TCR-C.	char		Y
	574	MatchType	MMT Level 2: Trading Mode Value copied from the TCR-C. Required if VenueType is Off-market	String	Venue of execution (XOFF and SINT)	C
	828	TrdType	Defaulted to 0 Value determined by APA based on flag combination (see section 7.2)	int	TPAC XFPH PORT	N
	855	SecondaryTrdType	Value determined by APA based on flag combination (see section 7.2)	int	BENC RFPT PORT CONT CLSE GIVE	N
	2896	TertiaryTrdType	Value determined by APA based on flag combination (see section 7.2)	int	PORT CONT CLSE GIVE	N
	2963	TertiaryTrdType	Value determined by APA based on flag combination (see section 7.2)	int	XBDT	

	2373	IntraFirmTradeIndicator	Value copied from the TCR-C.	Boolean	IGRP	
	1115	OrderCategory	MMT Level 3.2: NEGOTIATION INDICATOR OR PRE-TRADE TRANSPARENCY WAIVER Value copied from the TCR-C.	char		N
	829	TrdSubType	MMT Level 3.3: Agency Cross Trade Indicator Value copied from the TCR-C.	int	ACTX	N
	487	TradeReportTransType	MMT Level 3.4: Modification Indicator. 0 = New (Only sent to counterparty firm) 1 = Cancel (Only sent to counterparty firm) 2 = Replace (Enrichment TCR-S) 3 = Release (Publication or pre-release of deferred trade report, sent to both entering and counterparty firm)	int		Y
	2405	ExecMethod	MMT Level 3.7: Off-book automated/manual Value copied from the TCR-C.	int		N
	2667	AlgorithmicTradeIndicator	MMT Level 3.9: ALGORITHMIC INDICATOR Value copied from the TCR-C.	int	ALGO	N
	1390	TradePublishIndicator	MMT Level 4.1: PUBLICATION MODE / POST-TRADE DEFERRAL: REASON Value copied from the TCR-C.	int		N

	1934	RegulatoryReportType	MMT Level 4.2: POST-TRADE DEFERRAL OR ENRICHMENT: TYPE Level 4.2: POST-TRADE DEFERRAL OR ENRICHMENT: TYPE 11 = LMTF 12 = DATF 13 = VOLO 14 = FWAF 15 = IDAF 16 = VOLW 17 = FULF 18 = FULA 19 = FULV 20 = FULJ 21 = COAF Value determined by the APA	int	LMTF, DATF, VOLO, FWAF, IDAF, VOLW, FULF, FULA, FULV, FULJ, COAF	N
	20200	ApplySupplementaryDeferral	Specifies if the trade report should use supplementary deferral if eligible. Value copied from the TCR-C.	Boolean		Y
	20201	ExtendedSupplementaryDeferralRegime	Extension of MMT Level 4.2: POST-TRADE DEFERRAL OR ENRICHMENT to support certain special regimes. 101 = DATF Extended Value determined by the APA	int		N
	570	PreviouslyReported	MMT Level 5: Duplicative Indicator Y = Previously reported N = Not reported Value copied from the TCR-C.	Boolean	DUPL	N
	30	LastMkt	Value validated by APA	Exchange		N

MMT Helper Fields							
	Tags		Field	Description	Data Type	ESMA/FCA	Reqd
	1838		NoTradePriceConditions	The number of trade price conditions. **Used for MMT Levels 3.1, 3.6, and 3.8** Group copied from the submitted trade report.	int		N
	1838	1839	TradePriceCondition	MMT Level 3.1: TRANSACTION TYPE: TRANSACTION CATEGORY Value copied from the TCR-C.	int	RPRI SDIV NPFT TNCP PNDG NOAP	N
	2668		NoTrdRegPublications	Number of regulatory publication rules in repeating group. Group copied from the submitted trade report.	int		N
	2668	2669	TrdRegPublicationType	**Used for MMT Levels 3.2, 3.5, and 4.1** 0 = Pre-trade transparency waiver 1 = Post-trade deferral Value copied from the TCR-C unless reset by the system	int		N
	2668	2670	TrdRegPublicationReason	• If TradeReportTransType=3 (Release) this field contains the values published • Otherwise, this field contains values copied from the TCR-C and values derived by the APA **Valid values when TrdRegPublicationType(2669)=1:** Only 1 of the following will be selected for publication 6 = Deferral due to "Large in Scale" 7 = Deferral due to "Illiquid Instrument" 8 = Deferral due to "Size Specific"	int	NLIQ OILQ PRIC RFPT LRGS ILQD SIZE	N

Party and Side Groups							
	Tags			Field	Description	Data Type	ESMA/FCA	Reqd
	552			NoSides	Repeating group for sides. Always 1, only the receiving firm's side of the trade is returned.	NumInGroup		Y
	552	54		Side	1 = Buy, 2 = Sell, 8 = Crossed (Only valid for exchanges)	char		Y
	552	29		LastCapacity	Value copied from the TCR-C. This is not populated in the TCR-S sent to the counterparty.	char		C
	552	625		TradingSessionSubId	Level 2: Trading Mode Value copied from the TCR-C. This is not populated in the TCR-S sent to the counterparty	String		C
	552	1		Account	Value copied from the TCR-C. This is not populated in the TCR-S sent to the counterparty	String		N
	552	581		AccountType	Value copied from the TCR-C. This is not populated in the TCR-S sent to the counterparty.	int		N
	552	453		NoPartyIDs	Number of party IDs.	NumInGroup		Y
	552	453	448	PartyID	ID of party *(When 452=12 or 452=117, values exceeding 11 characters are truncated)*	String		Y
	552	453	447	PartyIDSource	C = Generally accepted market participant D = Custom E = ISO Country Code G = MIC N = LEI	char		Y

	552	453	452		PartyRole	1 = Executing Firm (Required) 17 = Contra Firm (Required if NoSides = 2) 12 = Trader ID 55 = Session ID (Only on message sent to counterparty) 63 = Systematic Internaliser (SI) 64 = Multilateral Trading Facility (MTF) 65 = Regulated Market (RM) 67 = Investment Firm (MiFID II) 73 = Execution Venue (OTF) 75 = Location ID 76 = Desk ID (Only on message sent to entering firm) 117=Salesperson ID **Note:** The message might contain two each of PartyGroups with PartyRole(452) =ExecutingParty(1) or Contra Firm(17). The two will have different values in PartyIDSource(447).	int		Y
	552	453	802		NoPartySubIDs	Value copied from the TCR-C.	NumInGroup		N
	552	453	802	523	PartySubID	Value copied from the TCR-C.	String		C
	552	453	802	803	PartySubIDType	Value copied from the TCR-C.	int		C
	Tag				Field	Description	DataType	ESMA/FCA	Reqd
	27020				TVTIC	TradeID (1003) in base 10 Only populated for off book, on exchange trades	String		C
					StandardTrailer				Y

5 Trade reporting message guide

5.1 Submitting new trades

All tags that are required for submitting new trade reports to TRADEcho APA are detailed below. Further down, differences are explained between certain types of trades.

Tag	Required?
FirmTradeID	Required
SecurityID	Required
SecurityIDSource	Required
LastQty	Required
LastPx	Required only if it is not PNDG/NOAP
Currency	Required only if it is with Price Notation=Unit Price
TransactTime	Required
SettlDate	Only required for off-book equity trades taken on exchange
NotionalAmount	Required when instrument is non-equity OR non-equity like
NotionalCurrency	Required for non-equity if Currency is left blank
MatchType	Required for off-book trades
TradeReportTransType	Always 0
VenueType	Required for off-book trades
NoSides	2 sides required by On-Exchange APA trades
• Side	Required
• LastCapacity	Required on entering firm's side
• NoPartyIDs	Required
• PartyID	Required
○ PartyIDSource	Required
○ PartyRole	Required

5.1.1 Submitting OTC and SI trades

When submitting OTC and SI trades the APA does not require any counterparty information unless offering assisted reporting.

Tag	Value
VenueType	'O'
MatchType	1 (OTC) or 9 (SI)
NoSides	1 (Counterparty side is optional)

Example of new OTC trade with both sides populated:

FirmTradeID (1041) = **FTIDXYZ123**

SecurityID (48) = **SE0000106270**

SecurityIDSource (22) = **4**

Currency (15) = "**GBP**"

LastQty (32) = **1000**

LastPx (31) = **23**

TransactTime (60) = "**20170208-15:05:30**"

SettlDate = "**20170210**"

TradeReportTransType (487) = **0**

TradePublishIndicator (1390) = **2**

VenueType (1430) = '**O**'

MatchType (574) = **1**

NoSides (552) = **2**

- **Side** (54) = **1**
- **LastCapacity** (29) = **4**
- **NoPartyIDs** (453) = **3**
  - **PartyID** (448) = [LSE Member ID]
  - **PartyIDSource** (447) = '**D**'
  - **PartyRole** (452) = **1**
- ---
  - **PartyID** (448) = [LEI]
  - **PartyIDSource** (447) = '**N**'
  - **PartyRole** (452) = **1**
- ---
  - **PartyID** (448) = [Desk]
  - **PartyIDSource** (447) = '**D**'
  - **PartyRole** (452) = **76**
- ---
- **Side** (54) = **2**
- **NoPartyIDs** (453) = **1**
  - **PartyID** (448) = [LSE Member ID]
  - **PartyIDSource** (447) = '**D**'
  - **PartyRole** (452) = **17**

5.1.2 New On-Exchange Off-book trades

Off-book trades are executed under the rules of the LSE when **MatchType** = **3** and **OnExchangeInstr** = **1**. Counterparty information must be supplied in the form of a LSE Member ID. The changes from OTC and SI trades are:

Tag	Value
OnExchangeInstr	1
MatchType	3 (On-Exchange)
NoSides	2

Note: Target APA must be ECHO for On-Exchange Off-book trades

5.1.3 Submitting On-book On-Venue trades to the SRR

Note: As this document was created as a subset of the complete TRADEcho FIX Specification that includes both APA and SRR functionality, the original SRR section headings have been retained to maintain consistency of referencing between the 2 documents.

5.1.4 MTF/OTF reporting

Trades submitted by OTF:s and MTF:s using TRADEcho APA for publication are similar to the On-book trades, but only supply one side with **Side** = **8**.

Note: Under MiFID II the transaction time requires micro second granularity.

Example of an MTF trade:

FirmTradeID (1041) = "**FTIDXYZ123**"

SecurityID (48) = "**SE0000106270**"

SecurityIDSource (22) = **4**

Currency (15) = "**GBP**"

LastQty (32) = **23**

LastPx (31) = **256**

TransactTime (60) = "**20170208-15:05:30.012345**"

TradeReportTransType (487) = **0**

TradePublishIndicator (1390) = **1**

VenueType (1430) = '**D**'

NoSides (552) = **1**

- **Side** (54) = **8**
- **NoPartyIDs** (453) = **1**
  - **PartyID** (448) = [MIC]
  - **PartyIDSource** (447) = '**G**'
  - **PartyRole** (452) = **64**

5.1.5 Cancelling trades

When cancelling a trade, the identifier that the service assigned the trade (**TradeID**) shall be provided, along with the details below.

Tag	Value
TradeID	Required
SecurityID	Required
SecurityIDSource	Required
TradeReportTransType	1
NoSides	Same info in side group as original trade is required
• Side	Y
• LastCapacity	Y
• NoPartyIDs	Y
○ PartyID	Y
○ PartyIDSource	Y
○ PartyRole	Y

Note: If the Trade Report is older than 30 days, the cancel request is considered to be a Late Cancel request. For this case, the APA requires a full set of attributes and the Trade Report is validated as a new trade submission.

5.1.6 Amending trades

When amending trades on the APA a cancellation message needs to be sent, followed by a new submission of the trade. The new submission must be sent

on same day as the cancellation request and shall have **OrigTradeID** populated with the original **TradeID** that the APA assigned the trade.

Apart from the new values in the amended fields, all original details of the trade must be submitted.

5.2 Recommended usage of Trade Type group of tags for Post Trade MMT Flags

As per FIX Trading Community recommendations, following combinations of **TrdType (828)**, **SecondaryTrdType** (855) and **TertiaryTrdType** (2896) should be allowed to represent BENC, PORT and CONT and GIVE flags for **TargetAPA**=ECEU and BENC, PORT, CLSE and GIVE for **TargetAPA**=ECHO.

Note: TRADEcho will reject a trade report submitted with any other combinations which is not present in the following table.

FLAG	TrdType (828) Default - 0	SecondaryTrdType (855)	TertiaryTrdType (2896)	Asset Class	Action for UK	Action for EU
PORT	0/62/65/2	50		Eq	Allow PORT	Allow PORT
PORT	0/62/2	50		Neq	Remove PORT (Reject for OnEx/MTF/OTF)	Allow PORT
PORT	65	50		Neq	Remove PORT (Reject for OnEx/MTF/OTF)	Remove PORT (Reject for MTF/OTF)
CONT	0/62/65/2	65		Eq	Remove CONT (Reject for OnEx/MTF/OTF)	Allow CONT
CONT	0/62/65/2	65		Neq	Remove CONT (Reject for OnEx/MTF/OTF)	Remove CONT (Reject for MTF/OTF)
BENC	0/62/65/2	64		Eq	Allow BENC	Allow BENC
BENC	0/62/65/2	64		Neq	Allow BENC	Allow BENC
BENC+PORT	0/62/65/2	64	50	Eq	Allow BENC, PORT (Reject for OnEx)	Allow BENC, PORT
BENC+PORT	0/62/2	64	50	NEq	Allow BENC, Remove PORT (Reject for OnEx/MTF/OTF)	Allow BENC, PORT
BENC+PORT	65	64	50	NEq	Allow BENC, Remove PORT (Reject for OnEx/MTF/OTF)	Allow BENC, Remove PORT (Reject for MTF/OTF)
BENC+CONT	0/62/65/2	64	65	Eq	Allow BENC, Remove CONT (Reject for OnEx/MTF/OTF)	Allow BENC, CONT
BENC+CONT	0/62/65/2	64	65	NEq	Allow BENC, Remove CONT (Reject for OnEx/MTF/OTF)	Allow BENC, Remove CONT (Reject for MTF/OTF)
CONT+PORT	0/62/65/2	65	50	Eq	Allow PORT, Remove CONT (Reject for OnEx/MTF/OTF)	Allow PORT, CONT

CONT+PORT	0/62/2	65	50	NEq	Remove PORT, CONT (Reject for OnEx/MTF/OTF)	Allow PORT, Remove CONT (Reject for MTF/OTF)
CONT+PORT	65	65	50	NEq	Remove PORT, CONT (Reject for OnEx/MTF/OTF)	Remove PORT, CONT (Reject for MTF/OTF)
PORT+BENC+CONT	50	64	65	Eq	Allow PORT,BENC Remove CONT (Reject for OnEx/MTF/OTF)	Allow PORT,BENC, CONT
PORT+BENC+CONT	50	64	65	NEq	Allow BENC, Remove CONT, PORT (Reject for OnEx/MTF/OTF)	Allow PORT,BENC Remove CONT
CLSE	0/62/65/2	67		Eq	Allow CLSE	Remove CLSE (Reject for MTF/OTF)
CLSE	0/62/65/2	67		NEq	Remove CLSE (Reject for OnEx/MTF/OTF)	Remove CLSE (Reject for MTF/OTF)
PORT+CLSE	0/62/65/2	67	50	Eq	Allow PORT, CLSE (Reject for OnEx)	Allow PORT, Remove CLSE (Reject for MTF/OTF)
PORT+CLSE	0/62/65/2	67	50	NEq	Remove PORT, CLSE (Reject for OnEx/MTF/OTF)	Allow PORT, Remove CLSE (Reject for MTF/OTF)
CONT+CLSE	0	67	65	Eq	Allow CLSE, Remove CONT (Reject for OnEx/MTF/OTF)	Allow CONT, Remove CLSE (Reject for MTF/OTF)
CONT+CLSE	0	67	65	NEq	Remove CONT, CLSE (Reject for OnEx/MTF/OTF)	Remove CONT, CLSE (Reject for MTF/OTF)
PORT+CONT+CLSE	50	67	65	Eq	Allow PORT, CLSE, Remove CONT (Reject for OnEx/MTF/OTF)	Allow PORT, CONT, Remove CLSE (Reject for MTF/OTF)
PORT+CONT+CLSE	50	67	65	NEq	Remove PORT, CONT, CLSE (Reject for OnEx/MTF/OTF)	Remove PORT, CONT, CLSE (Reject for MTF/OTF)
BENC+CLSE	0/62/65/2	64 & 67		Eq/Neq	Reject the trade	Reject the trade
GIVE	0/62/65/2	61		Eq	Allow GIVE (Reject for OnEx)	Allow GIVE
GIVE	0/62/65/2	61		NEq	Allow GIVE (Reject for OnEx)	Allow GIVE
BENC+GIVE	0/62/65/2	64	61	Eq	Allow BENC, GIVE (Reject for OnEx)	Allow BENC, GIVE
BENC+GIVE	0/62/65/2	64	61	NEq	Allow BENC, GIVE (Reject for OnEx)	Allow BENC, GIVE
PORT+GIVE	0/62/65/2	50/61	61/50	Eq	Allow PORT, GIVE (Reject for OnEx)	Allow PORT, GIVE
PORT+GIVE	0/62/65/2	50/61	61/50	NEq	Allow GIVE (Reject for OnEx)	Allow PORT, GIVE
CONT+GIVE	0/62/65/2	65/61	61/65	Eq	Allow GIVE (Reject for OnEx)	Allow CONT, GIVE
CONT+GIVE	0/62/65/2	65/61	61/65	NEq	Allow GIVE (Reject for OnEx)	Allow GIVE (Reject for MTF/OTF)

CLSE+GIVE	0/62/65/2	67	61	Eq	Allow CLSE, GIVE (Reject for OnEx)	Allow GIVE (Reject for MTF/OTF)
CLSE+GIVE	0/62/65/2	67	61	NEq	Allow GIVE (Reject for OnEx)	Allow GIVE (Reject for MTF/OTF)
PORT+CONT+GIVE	50	65/61	61/65	Eq	Allow PORT, GIVE (Reject for OnEx)	Allow PORT, CONT, GIVE
PORT+CONT+GIVE	50	65/61	61/65	NEq	Allow GIVE (Reject for OnEx)	Allow PORT, GIVE
CONT+GIVE+CLSE				Eq	Reject the trade	Reject the trade
CONT+GIVE+CLSE				NEq	Reject the trade	Reject the trade
BENC+PORT+GIVE	50	64	61	Eq	Allow BENC, PORT, GIVE (Reject for OnEx)	Allow BENC, PORT, GIVE
BENC+PORT+GIVE	50	64	61	NEq	Allow BENC, GIVE, Remove PORT (Reject for OnEx/MTF/OTF)	Allow BENC, PORT, GIVE
CLSE+PORT+GIVE	50	67	61	Eq	Allow CLSE, PORT, GIVE (Reject for OnEx)	Allow PORT, GIVE, Remove CLSE (Reject for MTF/OTF)
CLSE+PORT+GIVE	50	67	61	NEq	Allow GIVE, Remove PORT, CLSE (Reject for OnEx/MTF/OTF)	Allow PORT, GIVE, Remove CLSE (Reject for MTF/OTF)
BENC+CONT+GIVE					Reject the trade	Reject the trade
Any combinations of more than 3 flags are not possible.					Reject the trade	Reject the trade

5.3 Submitting Off-Book On-Exchange Trades under the rules of LSE

Trades submitted to TRADEcho for off book on exchange trade reporting under the rules of the LSE must comply with the new flag logic

NLIQ, OILQ, and PRIC flags will no longer be accepted and trade reports containing one or more of these flags will be rejected.

Negotiated transaction flag (NETW) and pre-trade large in scale flag (NTLS) are mutually exclusive. If submitted together the trade will be rejected. Trades need to be submitted with appropriate waiver flags and order category. TRADEcho will validate the flag based on Trade Value and corresponding the Instrument Pre-Trade LIS

Order Category	**Pre-Trade Client Flags**	**Trade-value Above Pre-Trade LIS?**	**TRADEcho Status**	**Pre-Trade Flag to Publish**	**Order Category to update**
Negotiated	NETW+NTLS	Y	Reject		
Negotiated	NETW+NTLS	N	Reject		
Negotiated	NTLS	Y	Accept	NTLS	not negotiated
Negotiated	NTLS	N	Reject		
Negotiated	NETW	Y	Accept	NETW	negotiated
Negotiated	NETW	N	Accept	NETW	negotiated
Negotiated		Y	Reject		

Negotiated		N	Reject		
Non-Negotiated (Ordinary)		Y	Accept		not negotiated
Non-Negotiated (Ordinary)		N	Accept		
Non-Negotiated (Ordinary)	NTLS	Y	Accept	NTLS	not negotiated
Non-Negotiated (Ordinary)	NETW	N	Accept	NETW	negotiated
Non-Negotiated (Ordinary)	NTLS	N	Reject		
Non-Negotiated (Ordinary)	NETW	Y	Accept	NETW	negotiated
Non-Negotiated (Ordinary)	NTLS+NETW	Y	Reject		
Non-Negotiated (Ordinary)	NTLS+NETW	N	Reject		
Non-Negotiated (Ordinary)	OILQ / NLIQ/ PRIC	Y/N	Reject		
Negotiated	OILQ / NLIQ/ PRIC	Y/N	Reject		