



Trax FIX Gateway Technical Specification APA Trade Reporting via FIX

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Revision History			
Version	Date	Comments	Release
0.01	April 2016	Initial pre-release draft (for discussion).	N/A
0.02	May 2016	Further refined pre-release draft (for internal circulation).	N/A
0.03	October 2016	Updated pre-release draft covering additional fields and asset types. (for internal circulation)	N/A
0.04	November 2016	Corrected field usage across AE and AR message types per FIX standards.	N/A
0.05	January 2017	Minor updates for clarity.	N/A
0.06	April 2017	<ul style="list-style-type: none"> • Removed package specific fields from package trade AR messages. • Updated custom field tag numbers. • Called out hybrid deferral scenario 	N/A
0.07	April 2017	<ul style="list-style-type: none"> • Updated for standardization in line with FIX 5.0 SP2 EP222 <ul style="list-style-type: none"> ○ Trading Capacity -> LastCapacity (29) ○ Trading Venue -> LastMkt (30) • Deprecated RegulatoryReportType (1934), TrdType (828), MatchType (574), and VenueType (1430) • Added support for CounterpartyTrading Capacity in the <RootParties> component block 	N/A
0.08	May 2017	Updated custom field tag names	N/A
0.09	May 2017	Added custom field TraxResponseText (22702) to <APADData> for unsolicited AE messages	N/A

Revision History			
Version	Date	Comments	Release
0.10	September 2017	<ul style="list-style-type: none"> Added enumeration "0 = Other" to BusinessRejectReason (380) Updated Counterparty details in the <RootParties> block by replacing RootPartyRoleQualifier (2388) with custom field TraxRootPartyRoleQualifier (22688) and allowing "N/A" as a Counterparty ID in RootPartyID (1117) Added support for BenchmarkCurveName (221) and BenchmarkCurvePoint (222) Removed 572 from AE message in Single Trade report and made 571 optional Added minor updates for clarity Removed TradeReportTransType (487) from Publication Status Updates 	N/A
0.11	October 2017	<ul style="list-style-type: none"> Removed leftover "required" language on TradeReportID (571) Added TimeUnit (997) Added support for "NOAP" and "PNDG" price via <TradePriceConditionGrp> Added support for version ID that can be updated by any inbound message. TraxTradeVersionID (22806) Added note on Amendment Lifecycle in Section 2.1.3. Removed LastCapacity (29) from <TrdCapRptAckSideGrp> as it's not supported in this component block. 	N/A
0.12	November 2017	<ul style="list-style-type: none"> Clarified required fields by asset class Clarified calculations for LIS/SSTI threshold comparison Updated ClearingIntention (1924) – now mandatory for all trades Added OTHR as a supported enumeration for TraxEmissionsType (22604) 	N/A

Revision History			
Version	Date	Comments	Release
0.13	November 2017	<ul style="list-style-type: none"> Updated ClearingIntention (1924) – now optional for all trades Added deferral type 10 to TraxDeferralTypeCode (22800) Updated SecurityID (48) – not required when SecurityIDSource (22) = 104 	N/A
0.14	December 2017	<ul style="list-style-type: none"> Added BATS specific fields Updated PriceType (423) – optional for Equities, added Discount and Premium enumerations Updated BenchmarkPriceType (663) – corrected supported enumerations Added clarity around the data expected in TraxNotionalAmount (22600) Updated session reset window to 23:05 – 23:10 	N/A
1.00	February 2018	<ul style="list-style-type: none"> Added AggressorIndicator to support BestEx reporting Clarified delayed publication scenario for equity and equity-like trades Clarified restricted characters for String datatype 	2018 Q1
1.01	April 2018	<ul style="list-style-type: none"> Added deferral type 15 to support Swedish deferrals Updated package reporting responsibility logic to account for SI status Added TraxCptySIStatus (22809) to AR messages Clarified that transparency flags will be provided on AR messages for all trades, regardless of outcome, where applicable 	2018 Q2
1.02	November 2018	<ul style="list-style-type: none"> Revision to the treatment of package trades Updated PriceType (423) – optional for Futures 	2018 Q4
1.03	December 2018	<ul style="list-style-type: none"> Updated <RootParties> block to support trade reporting post Brexit 	2019 Q1
1.04	March 2019	<ul style="list-style-type: none"> Change to definition of applicable NCA in <RootParties> 	2019 Q1
1.05	September 2022	<ul style="list-style-type: none"> Add Rejection and Warnings codes 	N/A

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1. Introduction

The purpose of the Trax APA service is to allow trade counterparties to fulfill their regulatory obligations under MiFID II for pre- and post-trade transparency. This includes:

- Pre-trade reporting and publication of quotes
- Post-trade reporting and publication of trades

This specification covers the ability to report trades into the Trax APA service using FIX. Reporting of quotes is covered in a separate technical specification.

This specification does not cover the outbound publication feeds, which can be subscribed to separately.

Please note that this specification is applicable to clients of both Trax UK and Trax NL B.V. At the time of writing, the business rules and formats defined in this specification are applicable to post-trade reporting within both the UK and EU jurisdictions should there be no transitional arrangements in place post Brexit.

1.1 FIX Connections

Separate FIX connections should be set up for testing/UAT and production purposes.

Connection identifiers will be agreed at setup time between the FIX participant and Trax Client Integration (i.e. SenderCompID and TargetCompID values). Connections will then be associated with an admin group in the Trax APA system.

Subscribers can request to have multiple FIX connections, potentially permissioned to different functions. If using multiple connections for the same subscriber, Trax will route outbound messages according to the following rules:

- For immediate responses to an inbound message, Trax will send the response to the connection that sent in the original message only;
- For unsolicited messages sent as a result of an event within Trax (e.g. a published trade), Trax will send the message to all connections with the appropriate functional permission configured.

Please contact Customer Integration to set up FIX connection(s).

1.1.1 Message Routing to Trax Services

Trax supports multiple services via its FIX interface. In some cases, participants are able to send overlapping sets of FIX message types to these services, but for different purposes. For example, both the Trax Match and the Trax APA services process TradeCaptureReport (AE) messages, although the purpose is different – counterparty matching in the former case, MiFID II post-trade transparency reporting in the latter.

Trax uses the SenderSubID (50) / TargetSubID (57) pair in the <StandardHeader> to manage routing of messages from/to specific services.

In order to send an application-level message to the Trax APA service, participants must set the TargetSubID (57) = APA. Similarly, all outbound business messages from the Trax APA service will be sent with the SenderSubID (50) = APA.

Participants should expect other service descriptions to be added in the future.

1.2 Supported FIX Versions

Session Layer: For the session layer, the Trax FIX gateway currently supports version FIXT.1.1.

Application Layer: For application messages, the Trax FIX gateway currently supports FIX 5.0 SP2, up to and including Extension Pack EP228.

Trax Customization: In addition, Trax makes use of a number of custom extensions to existing FIX tags, as well as new custom tags. These are specified in this document.

All customizations are highlighted in blue in the body of the specification, and defined in detail in section 8 Trax Customizations.

1.3 Supported FIX Application Messages

The following FIX application messages will be supported for each function:

Function	Inbound (to Trax)	Outbound (from Trax)
All Functions	BusinessMessageReject (j)	BusinessMessageReject (j)
Post Trade Reporting	TradeCaptureReport (AE)	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

1.4 APA Participants

Trax APA participants are identified using a unique identifier agreed with Trax when setting up the account.

A single firm may have multiple legal entities and a single FIX connection can send and receive messages on behalf of each entity.

Participants must provide a Reporting Entity LEI on each trade, i.e. the legal entity identifier that identifies the party submitting FIX messages. Additionally, the Executing Firm LEI, i.e., the legal entity identifier under which a trade was executed, must be provided on each trade and it may or may not be different than the Reporting Entity LEI.

All outbound application messages sent by Trax will be addressed to a specific subscriber in the TargetCompID (56) field. This will be the unique identifier that identifies the FIX connection of the Trax APA Participant, which may or may not be an LEI.

Please contact Customer Integration to set up subscribers for testing and production purposes.

1.4.1 Applicable National Competent Authority

MiFID II allows competent authorities to authorise the deferred publication of (non-equity) trades. To allow Trax to determine if deferred publication is relevant to a trade, the National Competent Authority (NCA) supervising an Executing Firm is retained within the APA participants account setup.

In most cases, an Executing Entity will be subject to the deferral regime of a single NCA. However, the following types of firm may be subject to the deferral regime of more than one NCA¹:

- Non-UK and non-EU firms (e.g. US Firms) operating branches in both the UK and EU; and
- EU Firms operating a UK Branch.

To allow Trax to apply the relevant deferral regime, non-UK and non-EU firms operating branches in both the UK and EU will be required to identify the executing entity branch location (or applicable NCA) on a trade by trade basis.

To allow Trax to apply the relevant deferral regime, EU firms operating a UK branch will be required to identify the applicable NCA on a trade by trade basis when reporting transactions executed by their UK branch; i.e. to report trades under the jurisdiction of their home NCA and to report the same trades under the jurisdiction of the FCA.

The following points should be noted:

- EU firms operating a UK branch should note the requirement regarding the unique identifier for a Trade Report; i.e. separate FirmTradeIDs (Tag 1041) must be created where a transaction executed by the UK branch is subject to the transparency regimes of both their home NCA and the FCA
- Where a firm is required to report under the jurisdiction of more than one NCA, Trax will retain a default NCA for the firm. Trax will publish trades according the deferral regime of the default NCA if a trade does not identify the applicable NCA.

¹ Please refer to the Trax Brexit FAQs for further information.

1.4.2 APA Configurations

A Trax APA subscribers can have the following configurations:

- Send in trades for multiple Executing Firms (vendor model)
- Be the Reporting Entity for multiple Executing Firms (delegated reporting model)
- Subscribe to publication status updates that the session itself did not send in, i.e. that were submitted by (a) the GUI and (b) a different FIX session

1.5 Supported Functions and Instrument Types

This document includes the technical specifications of the post-trade reporting of executed trades in all MiFID II asset classes.

1.5.1 Concatenated IDs

MiFID II allows for the reporting of securities using ISIN and Concatenated IDs. Please contact the Client Service Management team for additional supporting documents that detail fields related to Concatenated IDs.

1.5.2 String Values

FIX datatype “String” has a restricted character set where ISO-8859-1 is supported, but “=”, “<”, and “>” are not allowed.

1.6 FIX Session Behavior

The Trax APA FIX interface utilizes a standard FIXT.1.1 session. Trax does not specify the details of this session behavior, as these are covered by the FIX protocol. It is strongly suggested that customer FIX implementations make use of an industry-standard FIX gateway to manage session behavior.

If customers wish to build their own FIX gateway, specifications for the session behavior can be found at <http://www.fixtradingcommunity.org>.

Daily Session Reset: Trax will recycle FIX sequence numbers daily, between 23:05 and 23:10 GMT. Customers are encouraged to log out prior to this time, reset their outbound sequence number to 1, and log back in after the window has passed.

All sessions that have not logged out normally prior to 23:05 GMT will be logged out by Trax. Trax will then disconnect the connections, reset all session (i.e. reset outbound sequence numbers and expected inbound sequence numbers to 1), and prevent re-connection until the sessions have been reset.

Note that messages sent/received in the prior session will not be automatically recovered once the session is reset.

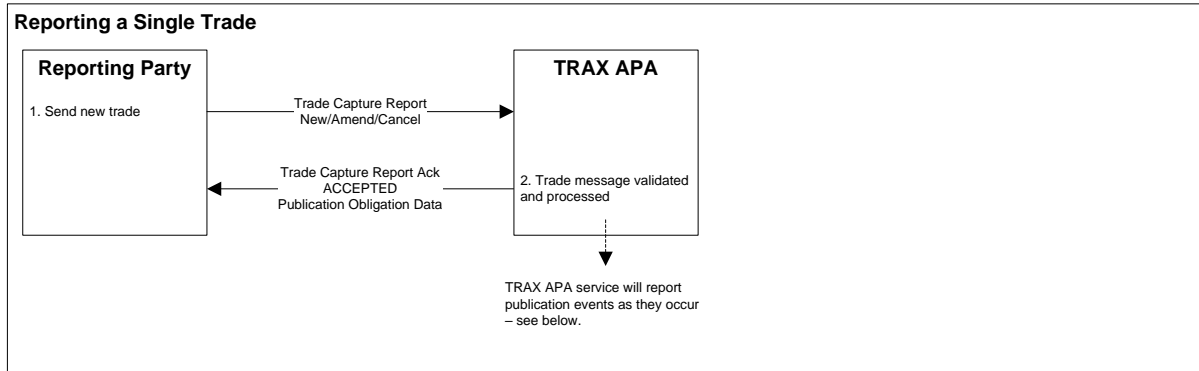
2. Message flows

This section defines the business message functions and associated message flows that will be supported by the FIX interface.

The APA functionality can be broken down into the following functional flows:

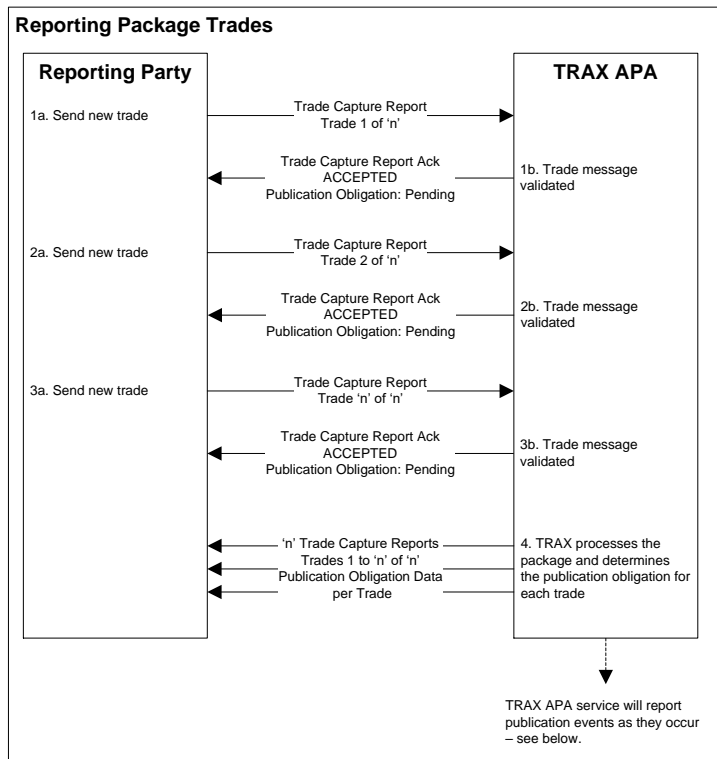
- Reporting a single trade
- Reporting package trades
- Publication status updates
- Unsolicited trade updates

Reporting a Single Trade – the reporting party submits a trade to Trax for MiFID II post-trade transparency purposes. The Trax APA service validates and processes the message, and sends back an ack/nack. If accepted, the ack contains the publishing obligation determined by the APA service.

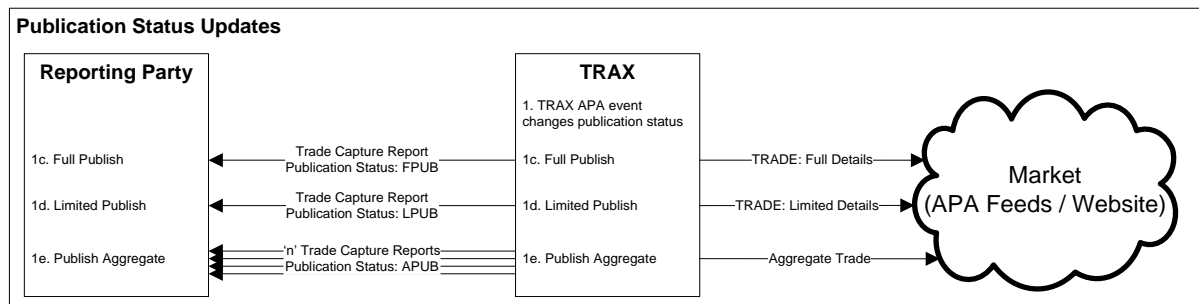


Reporting Package Trades – the reporting party submits a package of ‘n’ trades to Trax for MiFID II post-trade transparency purposes. Each trade is sent in a separate message, and is identified as part of a package with a common package identifier. The APA service validates each trade separately, and sends back an ack/nack. If accepted, each trade’s publication obligations are reported as pending.

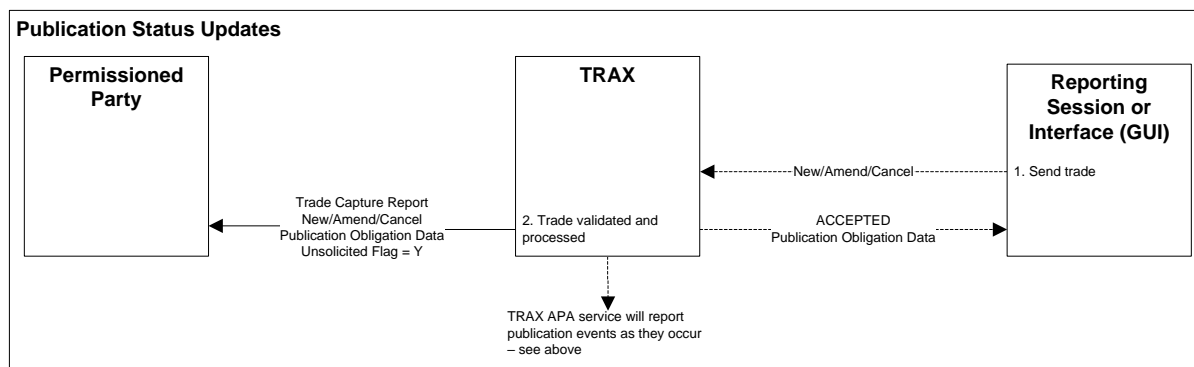
Once all the trades in the package have been received and accepted, the APA service processes the entire package and determines the publication obligations of each trade. This is communicated back to the reporting party on a trade by trade basis through unsolicited AE messages, i.e. in ‘n’ status updates.



Publication Status Updates – On various events, the Trax APA service will publish trade details to the market. This may be the full details of a trade, limited details, or details in an aggregate format where multiple trades were used as input. Publication Status Updates may occur immediately upon receiving the trade from the reporting party or they may occur after a period of time. When a publication event occurs, the Trax APA service will send a publication status update back to the reporting party.



Unsolicited Trade Updates – The Trax APA service will publish unsolicited trade updates to FIX sessions permitted to receive them on behalf of the reporting party, if the trade was reported through another means (e.g. via the APA service GUI, or via another FIX session). Unsolicited updates take the place of the ack that would normally be received if the session had submitted the trade itself, and will contain the same publication obligation data that would normally be sent in the ack.



The sub sections below detail the specific FIX messages and associated fields needed to implement these message flows.

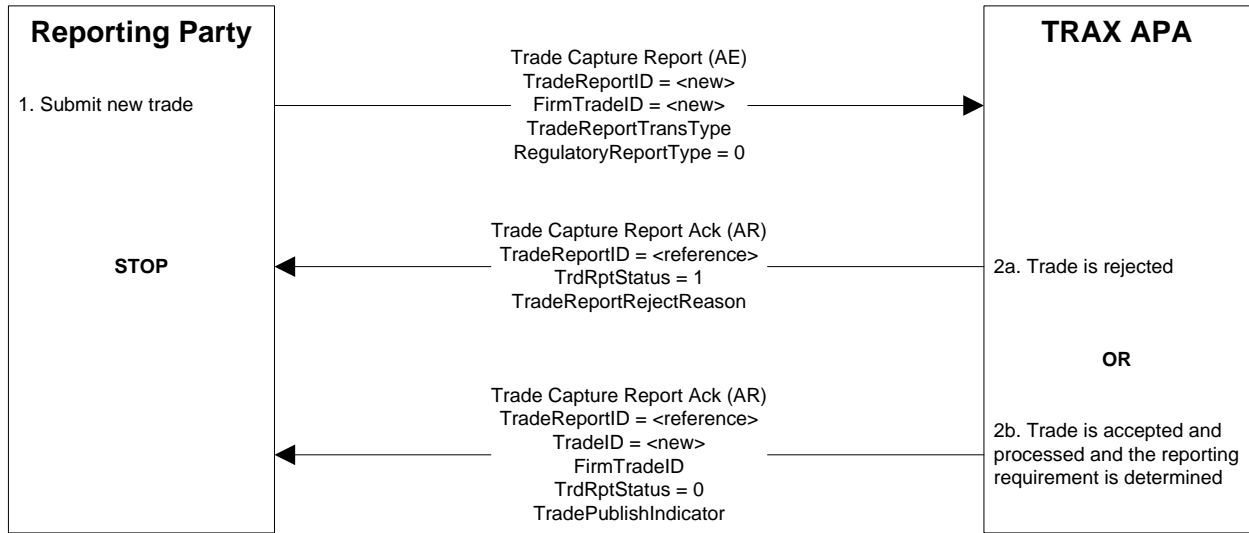
In general, only the fields needed for identifying each message function/step have been provided, with more detail about the business content contained in section 3. However, where a particular function requires minimal information (such as a cancel or reject), the entire message definition is provided here, and indicated as such.

The Trax APA business rules for various scenarios are contained in section 3 below.

The full message definitions, including all fields, are defined in sections 4 through 6, with re-used component blocks defined in section 7. Component blocks are referred to throughout the document using the convention <block name>.

Section 8 contains formal definitions of the custom extensions and fields used by Trax.

2.1 Report a Single Trade



To submit a new, canceled, or amended trade, the reporting party will send a TradeCaptureReport (AE) message containing the following fields:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	Identifier of the TradeCaptureReport (AE) message. Trax will return this in the associated TradeCaptureReportAck (AR) message in TradeReportRefID (572).
1003	TradeID	Required when submitting a canceled or amended trade. Trade ID of the trade, as assigned by Trax.
22806	TraxTradeVersionID	This field may be updated by any inbound message, regardless of TradeReportTransType (487). For the given trade, the most recent value in the TraxTradeVersionID field will be sent with any message back, this includes unsolicited AE messages.
1041	FirmTradeID	Required when submitting a new trade. Unique identifier of the trade assigned by the reporting party. Trax will return this in all associated messages.

Tag	FIX Field Name	Comments / Rules
487	TradeReportTransType	Indicates if the trade report is for a new, canceled or amended trade 0 = New 1 = Cancel 2 = Replace (amend)
<i>In addition to the fields above, a new or amended trade submission must contain all necessary data required to conform to the TraxAPA business rules laid out in section 3.1 below.</i>		

2.1.1 Rejecting a TradeCaptureReport (AE) Message

If the inbound TradeCaptureReport (AE) message cannot be processed, or violates a business rule, Trax APA will reject it with a TradeCaptureReportAck (AR) message containing the following fields (note that this is the entire message definition):

Tag	FIX Field Name	Req?	Comments / Rules
	<StandardHeader>	Y	MsgType = AR
571	TradeReportID	N	Identifier of the TradeCaptureReportAck (AR) message.
1003	TradeID	Y	Trade ID of the trade, as assigned by Trax.
939	TrdRptStatus	Y	1 = Rejected
751	TradeReportRejectReason	Y	Code indicating the reason the TradeCaptureReport (AE) message was rejected. 99 = Other
1328	RejectText	Y	Human readable text containing the reason for the rejection. Required if TradeReportRejectReason(751) is populated.
	<TraxAPAData>	Y	When rejecting a TradeCaptureReport (AE), only TraxAPAStatus (22804) will be sent. 22804 = REJT
	<StandardTrailer>	Y	

2.1.2 Acknowledging a TradeCaptureReport (AE) Message

Trax APA will acknowledge a TradeCaptureReport (AE) message with a TradeCaptureReportAck (AR) message containing the full details of the trade, including:

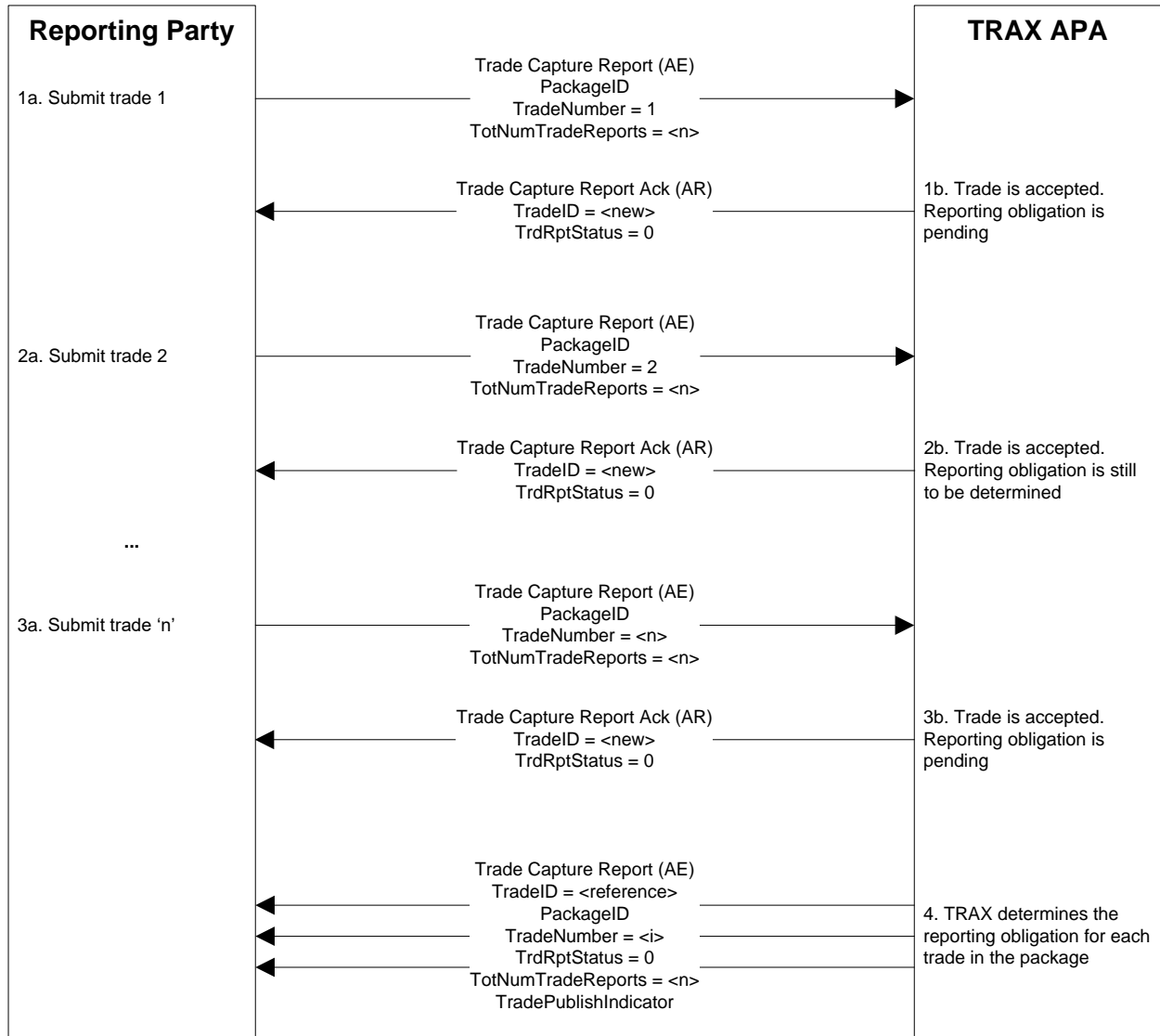
Tag	FIX Field Name	Comments / Rules
	<StandardHeader>	MsgType = AR
571	TradeReportID	TradeReportID (571) of the message.
572	TradeReportRefID	When acknowledging an amendment or cancel instruction, TRAX will include the TradeReportID (571) contained within the instruction in TradeReportRefID.
1003	TradeID	Trade ID of the trade, as assigned by Trax
22806	TraxTradeVersionID	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1041	FirmTradeID	Trade identifier as submitted by the reporting party
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID.
487	TradeReportTransType	0 = New 1 = Cancel 2 = Replace (amendment)
939	TrdRptStatus	0 = Accepted 3 = Accepted with errors
1390	TradePublishIndicator	Indicates if a trade will be published. 0 = Do not publish trade 1 = Publish trade 2 = Deferred publication <i>Note – field will not be present in the acknowledgement of a package trade, as the publication obligation is pending until all trades in the package have been received.</i>

Tag	FIX Field Name	Comments / Rules
779	LastUpdateTime	Timestamp of the last update to the trade in UTC time.
	<TraxAPAData>	Required if publication is deferred. Indicates the type of deferral. Also, indicates status of the trade in the Trax APA database.
	<StandardTrailer>	
<i>In addition to the fields above, a trade acknowledgement will contain all details of the trade, as submitted by the reporting party, that an AR message can carry.</i>		

2.1.3 Amendment Lifecycle

A trade may be amended until it has been cancelled. Once cancelled, all amendments for the trade will be rejected and the TradeReportID (571) may not be reused.

2.2 Report Package Trades



To submit a package of trades such that the APA applies reporting responsibility and publication obligation to the package as a whole, the reporting party should send in one TradeCaptureReport (AE) message per trade. Each message should contain the following data:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	Identifier of the TradeCaptureReport (AE) message. Trax will return this in the associated TradeCaptureReportAck (AR) message.

Tag	FIX Field Name	Comments / Rules
1003	TradeID	Trade ID of the trade, as assigned by Trax. Required when submitting a canceled or amended package trade.
22806	TraxTradeVersionID	This field may be updated by any inbound message, regardless of TradeReportTransType. For the given trade, the most recent value in the TraxTradeVersionID field will be sent with any message back, this includes unsolicited AE messages.
1041	FirmTradeID	Required when submitting a new trade. Unique identifier of the trade assigned by the reporting party. Trax will return this in all associated messages.
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID.
2489	PackageID	Identifier assigned to the collection of trades / package. Must be common across all trades in the package.
2490	TradeNumber	Ordinal number of the trade within the package
748	TotNumTradeReports	Total number of trades in the package
487	TradeReportTransType	Indicates if the trade report is for a new, canceled or amended trade 0 = New 1 = Cancel 2 = Replace (amend)
	<TraxTransparencyFlags>	Must contain Package Transaction (TPAC) or Exchange for Physicals (XFPH) flags to indicate a package transaction.
<i>In addition to the fields above, a new or amended trade submission must contain all necessary data required to conform to the Trax APA business rules laid out in section 3.1 below.</i>		

Note that TotNumTradeReports (748) must be the same on all trades and may not be changed after the first message is received. To change the number of trades in the package, the package must be cancelled and submitted as a new package, with a new PackageID (2489).

2.2.1 Acknowledging Package Trades

For package trades, each trade will be validated and accepted or rejected separately.

When rejecting a trade in the package, Trax will send a TradeCaptureReportAck (AR) rejection message conforming to the description in section 2.1.1 above. Note that a rejected trade message must be corrected and re-sent in order for the package to be completed and fully processed.

When accepting a trade that is part of a package, Trax will send a TradeCaptureReportAck (AR) message that does not contain the publication obligation data for the trade. This is because the rules determining the obligation require the entire package to be submitted prior to being evaluated.

The acceptance of a package trade will contain the following data:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	TradeReportID (571) of the message being acknowledged
572	TradeReportRefID	When acknowledging an amendment or cancel instruction, TRAX will include the TradeReportID contained within the instruction.
1003	TradeID	Trade ID of the trade, as assigned by Trax
22806	TraxTradeVersionID	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1041	FirmTradeID	Trade identifier as submitted by the reporting party
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID. Field will not be validated or processed by the APA. However, if provided it will be returned on all outbound messages associated with the trade.
487	TradeReportTransType	0 = New 1 = Cancel 2 = Replace (amendment)
	<RootParties>	At a minimum, the reporting party will be sent in the RootParties group.
939	TradeRptStatus	0 = Accepted
	<Instrument>	As provided by the reporting party.

Tag	FIX Field Name	Comments / Rules
	<TraxAPAData>	When acknowledging a package trade, TraxAPAStatus (22804) will be sent. 22804 = PEND

2.2.2 Updating Publication Obligation Data for Package Trades

Once all the trades in a package are received, Trax will determine the publication obligation of each trade and send this data back to the reporting party in an unsolicited TradeCaptureReport (AE) message. Note that there will be one TradeCaptureReport (AE) message per trade, and that the individual trades within a package will not necessarily have the same reporting obligation. The message will contain the following data:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	Identifier of the TradeCaptureReport (AE) message assigned by Trax
1003	TradeID	Trade ID of the trade, as assigned by Trax
22806	TraxTradeVersionID	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1041	FirmTradeID	Unique identifier of the trade, as assigned by the reporting party
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID.
2489	PackageID	Identifier assigned to the collection of trades / package
2490	TradeNumber	Ordinal number of the trade within the package
748	TotNumTradeReports	Total number of trades in the package
487	TradeReportTransType	Indicates if the trade report is for a new, canceled or amended trade 0 = New 1 = Cancel 2 = Replace (amend)
325	UnsolicitedIndicator	Indicates whether or not message is being sent as a result of a subscription request or not. Y = Message is being sent unsolicited

Tag	FIX Field Name	Comments / Rules
1390	TradePublishIndicator	Indicates if a trade will be published. 0 = Do not publish trade 1 = Publish trade 2 = Deferred publication
1011	MessageEventSource	Identifies the event or source which gave rise to the message For package trade publication obligation updates, will contain COMP
779	LastUpdateTime	Timestamp of the last update to the trade in UTC time. For unsolicited AE messages carrying publication information, this field will contain the publication time of the event in the message.
	<TraxAPAData>	Required if publication is deferred. Indicates the type of deferral. Also, indicates status of the trade in the Trax APA database.
<i>In addition to the fields above, the trade update will contain all details of the trade as submitted by the reporting party.</i>		

2.2.3 Canceling and Amending Package Trades

For packages that are incomplete, single trade cancellations and amendments will be processed. This allows clearing of the pending queue without first completing a package. For completed packages to be cancelled or amended, even if only one trade is being cancelled or amended, the entire package must be sent and all trades must reflect the same TradeReportTransType (487) – either 1 = cancel or 2 = replace.

Note that a package is considered complete once all trades in the package have been received. Incomplete package trades will remain in pending until the end of the business day. At the end of the day, any trade that is a member of an incomplete packages will be rejected using an unsolicited TradeCaptureReport (AE) message with MessageEventSource (1011) = 'REJT'.

2.2.4 Package Reporting Responsibility

For all trades in a package, if the counterparty to one of the trades is an SI, then the entire package will be set to NPUB for no responsibility to report. In this case, the responsibility to report falls to the counterparty, as the counterparty is an SI.

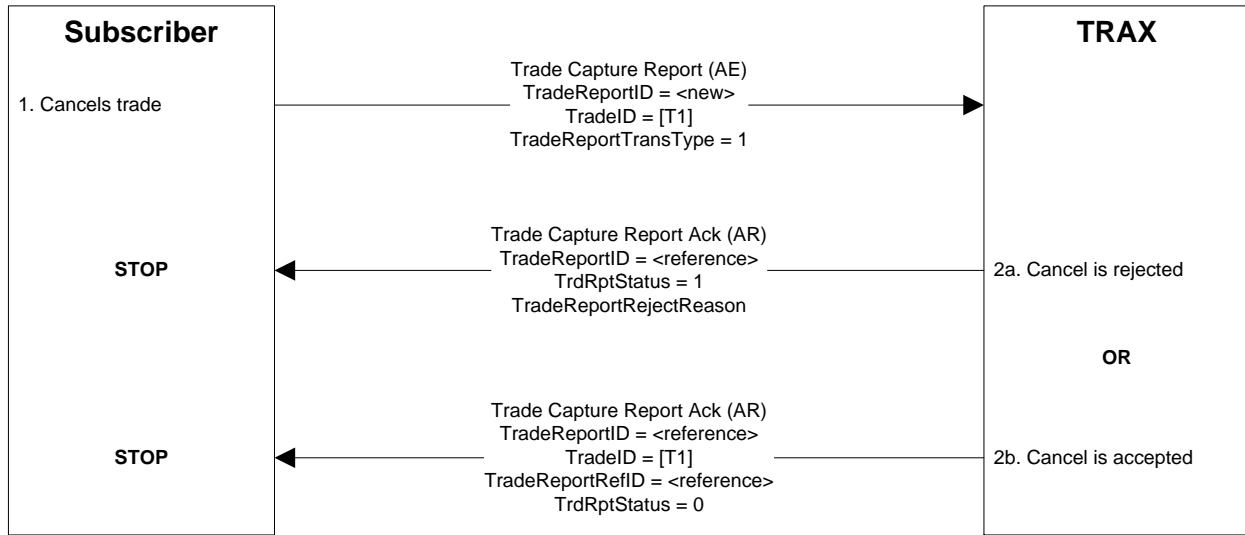
2.2.5 Reporting Packages as Single Trades

Note that it is also possible to submit package trades without package details by omitting the following fields on each message:

Tag	FIX Field Name	Comments / Rules
2489	PackageID	Identifier assigned to the collection of trades / package. Must be common across all trades in the package.
2490	TradeNumber	Ordinal number of the trade within the package
748	TotNumTradeReports	Total number of trades in the package

Note that omission of the package details means that the APA will apply reporting responsibility and publication obligation on a trade by trade basis as for reporting single trades - see Section 2.1. This option to report package trades should only be used where the reporting party has already established the reporting responsibility and publication obligations for the package as a whole and provides the required obligation on each trade component - see Reporting Party Override in Section 3.6.2.

2.3 Cancelling a Trade



When cancelling a trade, the reporting party does not need to include all the trade details in the TradeCaptureReport (AE) message. It is sufficient to send enough information to identify the desired trade, as follows (note that this is the entire message definition):

Tag	FIX Field Name	Req?	Comments / Rules
	<StandardHeader>	Y	MsgType = AE
571	TradeReportID	N	Identifier of the TradeCaptureReport (AE) message. TRAX will return this in the associated TradeCaptureReportAck (AR) message.
572	TradeReportRefID	N	The TradeReportID that is being reference for cancellation.
1003	TradeID	Y	TRAX identifier of the trade
22806	TraxTradeVersionID	N	This field may be updated by any inbound message, regardless of TradeReportTransType. For the given trade, the most recent value in the TraxTradeVersionID field will be sent with any message back, this includes unsolicited AE messages.
487	TradeReportTransType	Y	1 = Cancel
	<RootParties>	Y	Used to identify the trade executing party, counterparty, reporting party, and trader.

Tag	FIX Field Name	Req?	Comments / Rules
	<Instrument>	Y	Required by FIX for proper TradeCaptureReport (AE) message structure.
	<TrdCapRptSideGrp>	Y	When submitting a cancel instruction, NoSides (552) should always equal 1 while the executing party's side should be used in Side (54) and its Trading Capacity in LastCapacity (29).
	<StandardTrailer>	Y	

2.4 Publication Status Updates

At various times, the Trax APA service will publish trade details out to the market. When this occurs, Trax will send a publication status update on the trade in an unsolicited TradeCaptureReport (AE) message.

Note that publication can occur immediately after receipt of a trade (for full or limited published trades), at the end of the day (for aggregate trades), or at the end of a deferral process lasting up to 4 weeks after trade date (for extended deferrals).

In addition, a single trade may go through multiple publication events. For example, a trade may be immediately published with limited details, have the remaining details deferred, and then have fully published all details of the trade at the end of its deferral period. Trax will assign each event a separate publication identifier, carried in the SecondaryTradeID (1040) field. Note that this publication identifier, SecondaryTradeID (1040), will be made public as the Transaction Identification Code or TIC.

Publication status updates will contain the following data:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	Identifier of the TradeCaptureReport (AE) message assigned by Trax
1003	TradeID	Trade ID of the trade, as assigned by Trax
22806	TraxTradeVersionID	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1040	SecondaryTradeID	Unique identifier of the publication event, as assigned by Trax
1041	FirmTradeID	Unique identifier of the trade, as assigned by the reporting party

Tag	FIX Field Name	Comments / Rules
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID.
325	UnsolicitedIndicator	Indicates whether or not message is being sent as a result of a subscription request or not. Y = Message is being sent unsolicited
939	TrdRptStatus	Indicates if the trade report was successfully processed or not. Supported enumerations: 0 = Accepted 1 = Rejected 3 = Accepted with errors
1011	MessageEventSource	Identifies the event or source which gave rise to the message For publication, status updates will contain: LPUB - Limited details published APUB - Aggregate details published FPUB - Full details published
779	LastUpdateTime	Timestamp of the last update to the trade in UTC time. For unsolicited AE messages carrying publication information, this field will contain the publication time of the event in the message.
1390	TradePublishIndicator	Indicates the publication status of the trade. Supported enumerations: 0 = Do Not Publish Trade 1 = Publish Trade 2 = Deferred Publication
	<TraxAPAData>	Required. Indicates the type of publication. Also, indicates status of the trade in the Trax APA database.
<i>In addition to the fields above, the trade update will contain all details of the trade as submitted by the reporting party.</i>		

2.5 Unsolicited Trade Updates

Unsolicited trade updates will be sent to a FIX session if:

- A new trade, cancel or amend has been successfully submitted to the APA service on behalf of a reporting party
- The session has permission to send/receive APA data on behalf of the reporting party
- The session did not submit the new trade, cancel or amend instruction (eg, GUI entry)
- A package has completed
- A trade publication has occurred

Unsolicited trade updates will contain the following data and be sent via a TradeCaptureReport (AE) message:

Tag	FIX Field Name	Comments / Rules
571	TradeReportID	Identifier of the TradeCaptureReport (AE) message assigned by Trax
1003	TradeID	Trade ID of the trade, as assigned by Trax
22806	TraxTradeVersionID	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1041	FirmTradeID	Unique identifier of the trade, as assigned by the reporting party
1042	SecondaryFirmTradeID	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID.
487	TradeReportTransType	Indicates if the trade report is for a new, canceled or amended trade. Will not be provided on outbound publication status update messages. 0 = New 1 = Cancel 2 = Replace (amend)
	<RootParties>	At a minimum, the reporting party will be sent in the RootParties group.
939	TrdRptStatus	0 = Accepted 3 = Accepted with errors
325	UnsolicitedIndicator	Y = Message is being sent unsolicited

Tag	FIX Field Name	Comments / Rules
1390	TradePublishIndicator	Indicates if a trade will be published. 0 = Do not publish trade 1 = Publish trade 2 = Deferred publication <i>Note – field will not be present when reporting the acceptance of a package trade, as the publication obligation is pending until all trades in the package have been received.</i>
1011	MessageEventSource	Identifies the event or source which gave rise to the message Unsolicited status update types are as follows: PEND – Pending (used for packages) COMP – Package completed ACTP – Accepted REJT – Rejected LPUB – Limited details published APUB – Aggregate details published FPUB – Full trade details published
779	LastUpdateTime	Timestamp of the last update to the trade in UTC time. For unsolicited AE messages carrying publication information, this field will contain the publication time of the event in the message.
	TraxAPAData	If publication is deferred, indicates the type of deferral. Also, shows the status of the trade in the Trax APA database.
<i>In addition to the fields above, the trade update will contain all details of the trade as submitted by the reporting party.</i>		

2.5.1 Submission Account Updates

For FIX sessions that submit trades, unsolicited AE messages will be sent when:

- A trade has been entered in the GUI
- A package has been completed and the status of the trades has changed
- There is a publication event or status change for the trade

2.5.2 Listener Sessions

Listener sessions will receive Submission Account Updates as well as the contents of AR messages. However, since the session is a listener only, the message type used is an AE and is sent unsolicited.

2.6 Delegated Reporting

When appropriately configured, a FIX session may send trades on behalf of a third party (eg, an SI reporting on behalf of a buy-side client). This process is called Delegated Reporting.

However, if this is attempted prior to being appropriately configured, the trade will be rejected as the Executing LEI of the third party will not be a permitted LEI.

Please contact Client Service Management for more details, as needed.

3. Trax APA Business Rules

This section contains the business rules enforced by the Trax APA service.

In general, the FIX interface will require participants to send the least amount of information necessary to fulfill a given function, except where additional tags are required in order create a syntactically correct FIX message.

For outbound messages, Trax APA will send the maximum amount of information available. This may include:

- Enrichments to the participant’s message, such as additional identifiers and defaulted fields
- Publication status as well as calculated publication requirement as determined by the APA

3.1 Submitting Trades

When submitting or amending trades for APA post-trade transparency purposes, reporting firms should send in the following common data for all trade types:

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Instrument Identification Code Type	Y	Must be an ISIN or Concatenated ID (OTHR)	SecurityIDSource = ISIN (22=4) SecurityIDSource = OTHR (22=104)
Instrument Identification Code	C	ISO 6166 ISIN code of the instrument. Not required when sending Concatenated ID fields (separate document).	SecurityID (48)
Trade Date and Time	Y	Date and time when the transaction was executed. Timestamps must be at the microsecond level of precision.	TransactTime (60)
Trade Reference Number	Y	Reporting firm’s unique identifier for the transaction. Maximum length 100 characters.	FirmTradeID (1041)
Transaction Identification Code	C	Trax’s unique identifier for the transaction. Required when amending or cancelling a trade report.	TradeID (1003)

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Price Type	C	<p>Indicates the type of price of the trade. Modifies LastPx (31). Not required when NOAP or PNDG price is specified. For Bonds (ETCs & ETNs), Equities and Futures contracts, 2 = Per Unit will be assumed if this field is not provided.</p> <p>If 4 = Discount OR 5 = Premium are used, Price and Price Type will be converted to Percentage upon receipt and reflected as such in future messages.</p> <p>Supported enumerations: 1 = Percentage (bond trades) 2 = Per Unit 4 = Discount 5 = Premium 6 = Spread 9 = Yield 22 = Basis Points</p>	PriceType (423)
Price	C	<p>Price of the trade, expressed in PriceType (423) units.</p> <p>PNDG or NOAP may be indicated by populating the <TradePriceConditionGrp> and not providing LastPx (31).</p> <p>For Bonds (ETCs & ETNs), Equities and Futures contracts, 2 = Per Unit will be assumed if PriceType (423) is not provided.</p>	<p>Only one of the following sets should be provided, not both:</p> <p>NoTradePriceConditions (1838) TradePriceConditions (1839)</p> <p>OR</p> <p>PriceType (423) LastPx (31) Currency (15)</p>

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Benchmark Price	C	When Price Type = 6, a benchmark must be provided.	One of the following sets must be populated, but not both: BenchmarkCurveName (221) BenchmarkCurvePoint (222) OR BenchmarkPrice (662) BenchmarkPriceType (663) BenchmarkSecurityID (699) BenchmarkSecurityIDSource (761)
Price Currency	C	ISO 4217 currency code of the currency in which the price is or will be expressed. Also used as the currency of the curve or instrument spread to when PriceType (423) = 6. Not required when NOAP or PNDG price is specified.	Currency(15)
Venue of Execution	Y	Identifier of the venue where the transaction was executed. <i>See section 0 for details.</i>	LastMkt (30)
Quantity Type	Y	Type of quantity specified in quantity field. Supported enumerations: 0 = Units (shares, par, currency) 1 = Contracts 2 = Unit of Measure per Time Unit	QtyType (854)

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Quantity	Y	The quantity of the trade, expressed in QtyType (854) units.	LastQty(32)
Unit Of Measure	C	Required if UnitOfMeasureQty (1147) is populated. Indicates the unit of measure of the underlying asset upon which the contract is based. All enumerations through FIX.5.0SP2 EP228 are supported.	UnitOfMeasure (996)
Unit of Measure Quantity	C	Required if UnitOfMeasure (996) is populated. Indicates the quantity of the underlying commodity unit of measure upon which the contract is based, such as, 2500 lbs of lean cattle, 1000 barrels of crude oil, 1000 bushels of corn, etc. All enumerations through FIX.5.0SP2 EP228 are supported.	UnitOfMeasureQty (1147)
Contract Multiplier	O	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.	ContractMultiplier (231)
Notional Amount	C	Notional Amount or Notional Value; the total value of the traded position's assets. Required for all security types, except for Equity Financial Instruments.	TraxNotionalAmount (22600)

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Notional Currency	C	Required if Notional Amount is populated. The ISO 4217 currency of TraxNotionalAmount (22600) .	TraxNotionalCurrency (22601)
Transparency Flags	C	Indicators of the type of transaction. Multiple flags can be provided, while some flags will be enriched.	TraxNoTransparencyFlags (22801) TraxTransparencyFlag (22802)
Trading Capacity	Y	Used to further qualify the value of RootPartyRole(1119). 1 = Agent (AOTC) 2 = Cross as agent (AOTC) 3 = Cross as principal (MTCH) 4 = Principal (DEAL) 5 = Riskless principal (DEAL)	TraxRootPartyRoleQualifier (22688)
Transaction to be Cleared	O	Specifies the party's or parties' intention to clear the trade.	ClearingIntention (1924)
Package ID	C	Common identifier used across all trades in a package	PackageID (2489)
Number of Trades in Package	C	Ordinal number of this trade in a package, as well as total number of trades in the package (e.g. 1 of 7)	TradeNumber (2490) TotNumTradeReports (748)
Publication Flag	N	Used to override publication obligation rules with a specific publication instruction.	TradePublishIndicator (1390)
Deferral Type	C	Required if publication flag is deferred. Specific type of deferral to be used.	TraxDeferralTypeCode (22800)

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Counterparty	N	LEI code used to identify the other party of the trade. <i>See section 0 for details</i>	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119) TraxRootPartyRoleQualifier (22688)
Counterparty Branch Location	N	Where the other party of the trade is a foreign branch of the investment firm, the country code of the branch location	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119) RootPartySubID (1121) RootPartySubIDType (1122)
Buy/Sell Indicator	Y	Side of the trade from the reporting party's perspective. Note that only one side will be reported per trade.	Side (54)
Reporting Legal Entity Identifier	Y	LEI code used to identify the party under which the trade was reported. <i>See section 0 for details</i>	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119)
Executing Legal Entity Identifier	Y	LEI code used to identify the party under which the trade was executed. <i>See section 0 for details</i>	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119)
Executing Entity Branch Location	N	The branch of the executing entity that executed the transaction. Can be used to determine the applicable NCA if the Reporting Firm is reporting trades under more than one deferral regime under the same FIX connection	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119) RootPartySubID (1121) RootPartySubIDType (1122)

Business Element	Req?	Trax Business Rule(s)	FIX Fields
Applicable NCA	N	Identifies the applicable NCA for deferrals. Can be used if the Reporting Firm is reporting trades under more than one deferral regime under the same FIX connection	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119) RootPartySubID (1121) RootPartySubIDType (1122)
Delegated Reporting Flag	N	Flag to indicate if reporting has been delegated to a separate party.	TraxDelegatedReportingFlag (22803)
Trader ID	N	Free form code to aid in identifying and tracking the trade. <i>See section 0 for details</i>	RootPartyID (1117) RootPartyIDSource (1118) RootPartyRole (1119)
Book ID	N	Free form code to aid in identifying and tracking the trade. Trax will not validate or process the string, but will return it on all outbound messages regarding this trade.	SecondaryFirmTradeID (1042)
BATS Routing Information	N	For publication through the BATS APA service.	TraxPublicationRoutingFlag (22807) TraxBatsParticipantID (22808)

3.1.1 Fields by Asset Class

For further clarity on the fields required for each asset class, the following table has been provided. Note that this is not a complete list of required fields and only pertains to those fields that change due to asset classification. C1-C4 refer to notes provided below the table.

	UnitOfMeasure (996)	UnitOfMeasureQty (1147)	TimeUnit (997)	NoTradePriceConditions (1838)	TradePriceConditions (1839)	PriceType (423)	LastPx (31)	Currency (15)	QtyType (854)	LastQty (32)	ContractMultiplier (231)	TraxNotionalAmount (22600)	TraxNotionalCurrency (22601)	TraxRefPerStart (22602)	TraxRefPerEnd (22603)	TraxEmissionsType (22604)	ClearingIntention (1924)
Equity Financial Instruments			C3	C5	C5	O	C5	C5	Y	Y	O						O
Bonds (excl. ETCs and ETNs)			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Bonds (ETCs and ETNs)			C3	C5	C5	O	C5	C5	Y	Y	O						O
Structured Finance Products			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Securitised Derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Interest Rate Derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Equity Derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Commodity Derivatives	C4	C4	C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
C10 derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
FX Derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O

	UnitOfMeasure (996)	UnitOfMeasureQty (1147)	TimeUnit (997)	NoTradePriceConditions (1838)	TradePriceConditions (1839)	PriceType (423)	LastPx (31)	Currency (15)	QtyType (854)	LastQty (32)	ContractMultiplier (231)	TraxNotionalAmount (22600)	TraxNotionalCurrency (22601)	TraxRefPerStart (22602)	TraxRefPerEnd (22603)	TraxEmissionsType (22604)	ClearingIntention (1924)
Credit Derivatives			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
CFDs			C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y				O
Emission Allowances	Y	Y	C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y	Y	Y	Y	O
Emission Allowance Derivatives	Y	Y	C3	C1	C1	C1	C1	C1, C2	Y	Y	O	Y	Y	Y	Y	Y	O

Notes

- C1:** For Non-Equities: Only one of {NoTradePriceConditions (1838); TradePriceConditions (1839)} or {PriceType (423); LastPx (31); Currency (15)} should be used, not both.
- C2:** Price currency is required when PriceType (423) = 2 (Per Unit, MONE)
- C3:** If QtyType = 2, then TimeUnit (997) is required
- C4:** If either UnitOfMeasure (996) or UnitOfMeasureQty (1147) are provided, then both fields must be present
- C5:** For Equities Only: one of {NoTradePriceConditions (1838); TradePriceConditions (1839)} or {LastPx (31); Currency (15)} should be used, not both.

3.1.2 LIS/SSTI Comparison

The below table outlines the values and calculations that occur on an asset class basis for comparison to Large in Scale and Size Specific to an Instrument (LIS/SSTI) thresholds.

Note that Trax will cater for LIS/SSTI thresholds in different jurisdictions on the basis of the jurisdiction (applicable NCA) the participant is reporting under.

Asset Classes	Calculation or Value	Notes
Equity Financial Instruments	LastQty (32) * LastPx (31)	Converted to EUR/GBP as needed
Bonds (ETCs and ETNs)	LastQty (32) * LastPx (31)	Converted to EUR/GBP as needed
Emission Allowances	LastQty (32) * UnitOfMeasureQty (1147)	In TOCD (not converted)
Emission Allowance Derivatives	LastQty (32) * UnitOfMeasureQty (1147)	In TOCD (not converted)
All other classes	TraxNotionalAmount (22600)	Converted to EUR/GBP as needed

Conversion to the relevant currency occurs using the prescribed MiFID II currency conversion (i.e., exchange rate into EUR/GBP from the last business day of the prior year, as published by the European Central Bank).

3.1.3 Notional Amount

The below table outlines the data expected in the **TraxNotionalAmount (22600)** field. Note that this field is not expected for Equity Financial Instruments or Bonds (ETCs and ETNs):

Type of instruments	Expected Data in TraxNotionalAmount (22600)
Bonds (excl. ETCs and ETNs)	Quantity/Nominal Value
Structured Finance Products	Cash Value/Notional
Securitised Derivatives	Cash Value/Notional
Interest Rate Derivatives	Cash Value/Notional
Equity Derivatives	Cash Value/Notional
Commodity Derivatives	Cash Value/Notional
C10 derivatives	Cash Value/Notional
FX Derivatives	Cash Value/Notional
Credit Derivatives	Cash Value/Notional
CFDs	Cash Value/Notional

Type of instruments	Expected Data in TraxNotionalAmount (22600)
Emission Allowances	Cash Value/Notional
Emission Allowance Derivatives	Cash Value/Notional

3.2 Party Data

Party data is generally contained within the <RootParties> component block, with exception of the Executing Party's Trading Capacity, which is captured by LastCapacity (29) in the <TrdCapRptSideGrp> component block. The table below specifies the values to use for each party type in the <RootParties> block:

Party	RootPartyID (1117)	RootPartyIDSource (1118)	RootPartyRole (1119)	TraxRootPartyRoleQualifier (22688)	RootPartySubID (1121)	RootPartySubIDType (1122)
Reporting Party	LEI	N = LEI (ISO 17442)	116 = Reporting Entity	N/A	N/A	N/A
Executing Party	LEI	N = LEI (ISO 17442)	1 = Executing Firm	N/A	ISO Country Code (Branch Location)	39 – ISO Country Code
Counterparty	LEI or "N/A"	N = LEI (ISO 17442) or D = Proprietary / Custom Code	17 = Contra Firm	1 = Agent (AOTC) 2 = Cross as agent (AOTC) 3 = Cross as principal (MTCH) 4 = Principal (DEAL) 5 = Riskless principal (DEAL)	ISO Country Code (Branch Location)	39 – ISO Country Code
Trader	Internal mnemonic	D = Proprietary / Custom Code	53 = Trader mnemonic	N/A	N/A	N/A
Applicable NCA	Proprietary Code ²	E = ISO Country Code	68 = Host Competent Authority	N/A	N/A	N/A

Note Trading Capacity for the Executing party is contained in LastCapacity (29) while the Trading Capacity of the Counterparty remains in the <RootParties> component block.

² A Proprietary code is expected rather than an ISO Country Code; *please contact Customer Integration for the applicable code(s)*.

3.3 Execution Venue

The MIC of the venue of execution should be populated in the LastMkt (30) field in the body of the message. There are several special case MICs that can also be used:

- XOFF – use when the transaction on that financial instrument is not executed on a trading venue, SI or organised trading platform, or where an investment firm does not know if it is trading with another investment firm acting as an SI
- XXXX – use where the financial instrument traded is not listed, but where the underlying is admitted to trading or traded on a trading venue
- SINT – used for financial instruments admitted to trading or traded on a trading venue, where the transaction on that financial instrument is executed on a Systematic Internaliser.

Note that Trax will cater for trading venue, SI and organised trading platform classification in different jurisdictions on the basis of the jurisdiction (applicable NCA) the participant is reporting under.

3.4 Publication Status Updates

For outbound TradeCaptureReport (AE) messages sent by Trax, the current Trax publication status will be reported in the MessageEventSource (1011) field.

Publication Status (MessageEventSource)	Description
PEND	Pending (used for packages)
COMP	Package completed
ACTP	Accepted
REJT	Rejected
LPUB	Limited details published
APUB	Aggregate details published
FPUB	Full trade details published
<i>Note that this field should not be confused with Trade Status as they are related, but not identical.</i>	

3.5 Trax APA Status Updates

For outbound TradeCaptureReport (AE) messages sent by Trax, the current trade status will be reported in the **TraxAPAStatus (22804)** field.

Trax APA Trade Status (TraxAPAStatus)	Description
PEND	Pending (used for package trades)
NPUB	Not Published
DEFR	Publication deferred
CANC	Cancelled
REJT	Rejected
PUBL	Published
<i>Note that this field should not be confused with Publication Status as they are related, but not identical.</i>	

3.6 Publication Obligation Data

In the normal flow, Trax is responsible for determining the publishing obligation associated with each trade. The publication obligation is specified using the following fields:

- TradePublishIndicator (1390) – indicates whether the trade will not be published, will be published immediately, or if publication will be deferred
- **TraxDeferralTypeCode (22800)** – required when trade publication is to be deferred
- **TraxNoTransparencyFlags (22801)** and **TraxTransparencyFlag (22802)** – required when trade publication is to be deferred and must contain a deferral flag of ILQD, SIZE, or LRGS.

These fields will be sent by Trax in the TradeCaptureReportAck (AR) message accepting a trade submission and in all subsequent status updates as the trade passes through publication events.

3.6.1 Package Trades and Obligation Data

Package trades are an exception to the rule above. In the case of package trades, the APA business rules cannot determine the publication obligations of the individual trades until the entire package has been received (unless the package trade is submitted without package details – see Section 2.2.5 above).

In this case, the TradeCaptureReportAck (AR) messages accepting the trades will be sent without the publication obligation data. Once all trades have been received and accepted, Trax will send out a TradeCaptureReport (AE) message for each trade with its associated publication obligation.

3.6.2 Reporting Party Override

The reporting party may optionally choose to explicitly instruct Trax to report, defer or not report a trade, i.e. to override the Trax business rules determining publishing obligation. This is accomplished by sending the field TradePublishIndicator (1390) in the inbound trade submission.

In addition, if the trade is submitted with TradePublishIndicator = Deferred Publication (1390=2), then the reporting party must also specify the deferral type using the **TraxDeferralTypeCode (22800)** field and a reason for the deferral in **TraxTransparencyFlag (22802)**.

If TradePublishIndicator (1390) is submitted, Trax will follow the instructions regardless of the obligation implied by the APA service's business logic, and will return the fields in all subsequent TradeCaptureReportAck (AR) and TradeCaptureReport (AE) messages associated with the trade.

In the case where the override instruction differs from the APA's normal determination of the reporting obligation, Trax will send TrdRptStatus (939) = 3 (Accepted with errors) and a human readable warning message containing the APA's determination in the Text (58) field.

3.6.3 Deferral Flag Only (Hybrid Approach)

A hybrid approach to deferrals is available by sending a deferral flag in **TraxTransparencyFlag (22802)**, without specifying TradePublishIndicator (1390) or **TraxDeferralTypeCode (22800)**. If the trade has been flagged as ILQD, SSTI, or SIZE and the applicable NCA allows for deferrals, then the trade will be deferred in the manner prescribed by the NCA. If the NCA does not allow deferrals, then the trade will not be deferred.

Note that LRGS and SIZE are mutually exclusive for non-equities and may not be sent on the same trade.

3.6.4 Publication Delays

For some trades on equity and equity-like instruments, the trade may not be published immediately and it may not qualify for a deferral, but qualifies for a delayed publication instead. The publication obligation is specified using the following fields:

- TradePublishIndicator (1390) – will be set to 2, representing delayed/deferred publication.
- **TraxDeferralTypeCode (22800)** – for this scenario, the type will always be 24.
- **TraxNoTransparencyFlags (22801)** and **TraxTransparencyFlag (22802)** – will not be provided as there is not a deferral, but a delayed publication.

Note that the above scenario occurs when the equity or equity-like trade is traded outside of operating hours and its publication is delayed until before opening on the next trading day.

4. TradeCaptureReport (AE)

Tag	Field Name	Req?	Comment
	<StandardHeader>	Y	MsgType (35) = AE
571	TradeReportID	N	Unique identifier for this trade report message. Will be provided by Trax for all other outbound TradeCaptureReport (AE) messages.
572	TradeReportRefID	N	TradeReportID of the previous TradeCaptureReport (AE).
1003	TradeID	N	Trax's unique identifier for the trade. Not required when submitting a new trade. Required for all other TradeCaptureReport (AE) messages.
20806	TraxTradeVersionID	N	This field may be updated by any inbound message, regardless of TradeReportTransType. For the given trade, the most recent value in the TraxTradeVersionID (22806) field will be sent with any message back, this includes unsolicited AE messages.
1041	FirmTradeID	N	Subscriber's unique identifier for the trade. Required when submitting a new trade. Will be provided by Trax on all outbound messages associated with the trade.
1042	SecondaryFirmTradeID	N	Optional identifier for participants who wish to assign a separate ID to the trade, for example a Book ID. Field will not be validated or processed by the APA. However, if provided it will be returned on all outbound messages associated with the trade.

Tag	Field Name	Req?	Comment
2489	PackageID	N	Identifier assigned to a collection of trades so that they can be analyzed as one atomic unit for risk assessment and clearing.
2490	TradeNumber	N	Ordinal number of the trade within a series of related trades.
748	TotNumTradeReports	N	Used when sending trades in a package, or when responding to a query. Total number of trades returned as part of a package, or by a query.
487	TradeReportTransType	Y	Identifies Trade Report message transaction type. Required for inbound TradeCaptureReport (AE) messages. Will not be provided on outbound publication status update messages. Supported enumerations: 0 = New 1 = Cancel 2 = Replace
	<TradePriceConditionGrp>	C	Indicates if the price is NOAP or PNDG.
	<RootParties>	Y	Used to identify the trade executing party and branch, counterparty and branch, reporting party, trader and applicable NCA.
939	TrdRptStatus	N	Indicates if the trade report was successfully processed or not. Supported enumerations: 0 = Accepted 1 = Rejected 3 = Accepted with errors

Tag	Field Name	Req?	Comment
423	PriceType	C	<p>Indicates the type of price of the trade. Modifies LastPx (31). For Bonds (ETCs & ETNs), Equities and Futures contracts, 2 = Per Unit will be assumed if this field is not provided.</p> <p>Supported enumerations:</p> <ul style="list-style-type: none"> 1 = Percentage (bond trades) 2 = Per Unit 4 = Discount 5 = Premium 6 = Spread 9 = Yield 22 = Basis Points
31	LastPx	C	Price of the trade, expressed in PriceType (423) units.
	<SpreadOrBenchmarkCurveData>	C	Used to specify the price of a benchmark when PriceType (423) = 6.
15	Currency	C	<p>Identifies currency that was or will be used for price.</p> <p>Currencycode must be ISO 4217 standard.</p>
30	LastMkt	Y	<p>Market venue of execution for last fill, or an indication of the market where an order was routed.</p> <p>ISO 10383 Market Identifier Code (MIC) values (incl. XOFF, XXXX, SINT).</p>
854	QtyType	Y	<p>Type of quantity specified in quantity field. TimeUnit (997) is required when QtyType = 2 (Units of Measure per Time Unit):</p> <ul style="list-style-type: none"> 0 = Units (shares, par, currency) 1 = Contracts 2 = Unit of Measure per Time Unit

Tag	Field Name	Req?	Comment
32	LastQty	Y	Quantity (e.g. shares, units) bought/sold; the nominal or monetary value of the transaction; the number of units of the financial instrument.
22600	TraxNotionalAmount	N	Notional Amount or Notional Value; the total value of the traded position's assets. Required for all assets other than Equity Financial Instruments.
22601	TraxNotionalCurrency	N	The ISO 4217 currency of TraxNotionalAmount (22600).
	<Instrument>	Y	Required by FIX. Identifies the security traded.
60	TransactTime	Y	Time the transaction/trade represented by this TradeCaptureReport (35=AE) occurred. Execution time of trade in UTC time. Must be expressed to the microsecond level of precision.
22602	TraxRefPerStart	C	The start of the period specified in the Directive 2003/87/CE. Required for Emission Allowances and Emission Allowance Derivatives.
22603	TraxRefPerEnd	C	The end of the period specified in the Directive 2003/87/CE. Required for Emission Allowances and Emission Allowance Derivatives.
22604	TraxEmissionsType	C	Required for Emissions Allowances and Emissions Allowance Derivatives. One of the following 4 character codes: EUAE CERE ERUE EUAA OTHR

Tag	Field Name	Req?	Comment
	<TrdCapRptSideGrp>	Y	Used to specify the executing party's Side (54) and LastCapacity (29).
1390	TradePublishIndicator	N	Indicates if a trade should be reported via a market reporting service. The indicator governs all reporting services of the recipient. Supported enumerations: 0 = Do Not Publish Trade 1 = Publish Trade 2 = Deferred Publication
1924	ClearingIntention	O	Specifies the party's or parties' intention to clear the trade. Supported enumerations: 0 = Do not intend to clear 1 = Intend to clear
	<TraxAPAData>	N	Contains custom fields carrying data required by or provided by the APA service
22807	TraxPublicationRoutingFlag	N	Flag to indicate additional routing during processing: BATS = Send to BATS APA for Equity publication
22808	TraxBatsParticipantID	N	Enables routing of post trades to BATS APA. Must be the 4 character Participant ID as assigned by BATS.
	<StandardTrailer>	Y	

5. TradeCaptureReportAck (AR)

Tag	Field Name	Req?	Comment
	<StandardHeader>	Y	MsgType (35) = AR
571	TradeReportID	N	Identifier of the trade capture report message being accepted or rejected.
572	TradeReportRefID	N	The TradeReportID that is being referenced for some action, such as an amendment, or cancellation.
1003	TradeID	Y	Trax's unique identifier for the trade. Will be sent on all outbound TradeCaptureReportAck (AR) messages.
22806	TraxTradeVersionID	N	If provided on an inbound message, the most recent value in the TraxTradeVersionID field will be sent.
1041	FirmTradeID	N	As provided by the reporting party.
1042	SecondaryFirmTradeID	N	As provided by the reporting party.
487	TradeReportTransType	N	Transaction type of the trade capture report.
	<RootParties>	Y	As provided by the reporting party.
939	TrdRptStatus	Y	Indicates if the trade report was successfully processed or not. Supported enumerations: 0 = Accepted 1 = Rejected 3 = Accepted with errors <i>Note – does not indicate if the trade itself will be published or not, only whether the trade report message has been successfully validated and can be processed.</i>
751	TradeReportRejectReason	N	Code representing the reason for rejection of the trade report. 99 = Other

Tag	Field Name	Req?	Comment
1328	RejectText	N	Human readable text explanation for the rejection of the trade report. Required if TradeReportRejectReason(751) is populated.
58	Text	N	Where possible, a human readable message explaining any warnings that are present.
423	PriceType	N	As provided by the reporting party. However, if PriceType (423) was sent as 4 = Discount OR 5 = Premium, the price will be converted sent back as 1 = Percentage.
31	LastPx	N	As provided by the reporting party. However, if PriceType (423) was sent as 4 = Discount OR 5 = Premium, the price will be converted sent back as a Percentage.
15	Currency	N	As provided by the reporting party.
30	LastMkt	N	As provided by the reporting party.
854	QtyType	N	As provided by the reporting party.
32	LastQty	N	As provided by the reporting party.
996	UnitOfMeasure	N	As provided by the reporting party.
1147	UnitOfMeasureQty	N	As provided by the reporting party.
231	ContractMultiplier	N	As provided by the reporting party.
22600	TraxNotionalAmount	N	As provided by the reporting party.
22601	TraxNotionalCurrency	N	As provided by the reporting party.
22602	TraxRefPerStart	N	As provided by the reporting party.
22603	TraxRefPerEnd	N	As provided by the reporting party.
22604	TraxEmissionsType	N	As provided by the reporting party.

Tag	Field Name	Req?	Comment
1390	TradePublishIndicator	Y	Indicates if a trade has been reported via a market reporting service. Supported enumerations: 0 = Do Not Publish Trade 1 = Publish Trade 2 = Deferred Publication
	<Instrument>	Y	Required by FIX. As provided by the reporting party.
60	TransactTime	Y	As provided by the reporting party.
779	LastUpdateTime	N	Timestamp of the last update to the trade in UTC time.
	<TrdCapRptAckSideGrp>	Y	Required by FIX. For APA trades, it will contain only one side.
	<TraxAPAData>	Y	Contains custom fields carrying data provided by the APA service.
22809	TraxCptySIStatus	N	Identifies whether or not the counterparty is an SI, according to the Trax SI registry. This field will not be present if the counterparty SI status is unknown. One of the following: Y = the counterparty is an SI N = the counterparty is not an SI Note that Trax will cater for SI status in different jurisdictions on the basis of the jurisdiction (applicable NCA) the participant is reporting under.
	<StandardTrailer>	Y	

6. BusinessMessageReject (j)

Trax supports the BusinessMessageReject (j) message both inbound (from participants) and outbound (from Trax).

All inbound BusinessMessageReject (j) messages will result in an alert to Trax support personnel which will be investigated. The message should therefore be used sparingly by participants. Specifically, it should only be used to:

- Reject an application level message type that does not have a standard rejection message, i.e. TradeCaptureReportAck (AR) and TradeCaptureReportRequestAck (AQ) messages
- Inform Trax that an internal application is not available to process messages due to a production issue

Trax will only send a BusinessMessageReject (j) message in the following scenarios:

- The FIX gateway receives an application level message, but cannot communicate to the Trax system due to an internal production problem
- The FIX gateway receives an application level message that is not a supported message type

BusinessMessageReject (j) messages will not alter or report on the status of any business data or transactions within the Trax APA service. They are purely a means to trigger human investigation in cases where a serious problem may have occurred.

The table below represents the outbound BusinessMessageReject (j) messages participants can receive from Trax. For inbound messages, participants may send any fields supported in the standard FIX 5.0 SP2 specifications.

Tag	Field Name	Req?	Comment
	<StandardHeader>	Y	MsgType (35) = j
45	RefSeqNum	N	The MsgSeqNum of the message being rejected
372	RefMsgType	Y	The MsgType of the FIX message being referenced

Tag	Field Name	Req?	Comment
380	BusinessRejectReason	Y	Code to identify the reason for the Business Message Reject message. Supported enumerations: 0 = Other 1 = Unknown ID 3 = Unsupported Message Type 4 = Application Not Available 6 = Not Authorized
58	Text	N	Where possible, a human readable message explaining the rejection
	<StandardTrailer>	Y	

7. Component Blocks

The table below specifies the component blocks used by Trax APA:

Component Block	TradeCaptureReport (AE)	TradeCaptureReportAck (AR)	Parent Component Block(s)
<StandardHeader>	X	X	Message (All Message Types)
<StandardTrailer>	X	X	Message (All Message Types)
<TradePriceConditionGrp>	X		Message (AE)
<RootParties>	X	X	Message (AE, AR)
<Instrument>	X	X	Message (AE, AR)
<SpreadOrBenchmarkCurveData>	X	X	Message (AE, AR)
<TrdCapRptSideGrp>	X	-	Message (AE)
<TrdCapRptAckSideGrp>	-	X	Message (AR)
<TraxAPAData>	X	X	Message (AE, AR)
<TraxTransparencyFlags>	X	X	<TraxAPAData>

7.1 <StandardHeader>

The <StandardHeader> is required for all session and application layer messages. The table below specifies the fields supported by Trax.

Tag	Field Name	Req?	Comment
8	BeginString	Y	Must be the first field in the message. Always unencrypted. Will always = FIXT.1.1

Tag	Field Name	Req?	Comment
9	BodyLength	Y	Message length, in bytes, forward to CheckSum field. Must be the second field in the message. Always unencrypted.
35	MsgType	Y	<p>Defines the message type. Always the third field in the message. Always unencrypted.</p> <p>Supported enumerations:</p> <p><u>Session Level Messages</u></p> <p>0 = Heartbeat 1 = TestRequest 2 = ResendRequest 3 = Reject (Session Level) 4 = SequenceReset 5 = Logout A = Logon</p> <p><u>Application (Business) Level Messages</u></p> <p>AE = TradeCaptureReport AR = TradeCaptureReportAck j = BusinessMessageReject</p>
1128	AppVerID	N	<p>Not supported for session layer or BusinessMessageReject (j) messages, will be ignored if sent.</p> <p>Optional for all other inbound application messages.</p> <p>Trax will send AppVerID on all other outbound application messages.</p> <p>Supported enumerations:</p> <p>9 = FIX 5.0 SP2</p>
49	SenderCompID	Y	Value as defined for the FIX connection
56	TargetCompID	Y	Value as defined for the FIX connection

Tag	Field Name	Req?	Comment
115	OnBehalfOfCompID	N	Assigned value used to identify firm originating message if the message was delivered by a third party i.e. the third party firm identifier would be delivered in the SenderCompID field and the firm originating the message in this field.
128	DeliverToCompID	N	Not supported for inbound messages, will be ignored if sent. Trax will send DeliverToCompID on all outbound application messages except BusinessMessageReject (j). Value will be the SenderCompID for the trade the message is related to.
34	MsgSeqNum	Y	Usage as per FIX specification
50	SenderSubID	N	Required on outbound business messages. Used to identify the Trax service sending the message. Supported values: MATCH = Trax Match service APA = Trax APA service
57	TargetSubID	N	Required on inbound business messages. Used to identify the Trax service to which the message is being sent. Supported values: MATCH = Trax Match service APA = Trax APA service
43	PossDupFlag	N	Usage as per FIX specification
97	PossResend	N	Usage as per FIX specification
52	SendingTime	Y	Usage as per FIX specification (UTC time)
122	OrigSendingTime	N	Usage as per FIX specification (UTC time)

7.2 <StandardTrailer>

Tag	Field Name	Req?	Comment
10	Checksum	Y	Always last field in the message. Always unencrypted.

7.3 <TradePriceConditionGrp>

The <TradePriceConditionGrp> component block will be used in TradeCaptureReport (AE) messages to specify a traded price is PNDG (Pending) or NOAP (Not Applicable).

Tag	Field Name	Req?	Comment
1838	NoTradePriceConditions	Y	Number of trade price conditions. As NOAP and PNDG are mutually exclusive, this should always be 1.
→ 1839	TradePriceConditions	Y	<p>Price conditions in effect at the time of the trade. Supported enumerations:</p> <p>17 = Price is pending In the context of ESMA RTS 2, Annex II, Table 1, Price, this is ESMA's "PNDG" value. Used to indicate the transaction is pending a price at the time it was reported.</p> <p>OR</p> <p>18 = Price is not applicable In the context of ESMA RTS 2, Annex II, Table 1, Price and RTS 22, Annex I, Table 2, Field 33, this is to flag that the price is "not applicable" for the transaction at the time it was reported. This is ESMA's "NOAP" value in RTS 22.</p>

7.4 <RootParties>

The <RootParties> component block will be used in TradeCaptureReport (AE) and TradeCaptureReportAck (AR) messages to specify the following information on the trade:

- Executing Firm (Required)
- Reporting Party of the trade (Required)
- The trader who executed the trade, on the reporting party's side of the trade (Optional)
- Counterparty to a trade (Optional)
- Counterparty Trading Capacity (Optional)
- Applicable NCA (Optional)

Tag	Field Name	Req?	Comment
1116	NoRootPartyIDs	Y	Number of RootPartyID (1117), RootPartyIDSource (1118) and RootPartyRole (1119) groups specified below.
→ 1117	RootPartyID	Y	Party identifier/code. See RootPartyIDSource (1118) and RootPartyRole (1119).
→ 1118	RootPartyIDSource	Y	The type of identifier in RootPartyID (1117). Required if RootPartyID is specified. Supported enumerations: D = Proprietary/ Custom Code G = Market Identifier Code (MIC) N = Legal Entity Identifier (ISO 17442 LEI) E = ISO Country Code
→ 1119	RootPartyRole	Y	Role of the party identified in RootPartyID (1117) Supported enumerations: 1 = Executing Firm 17 = Contra Firm (Counterparty) 53 = Trader Mnemonic 68 = Host Competent Authority 116 = Reporting Entity

Tag	Field Name	Req?	Comment
→ 22688	TraxRootPartyRoleQualifier	N	Used to further qualify the role of RootPartyRole(1119). 1 = Agent (AOTC) 2 = Cross as agent (AOTC) 3 = Cross as principal (MTCH) 4 = Principal (DEAL) 5 = Riskless principal (DEAL)
	<RootSubParties>	N	Sub identifiers for a party

7.5 <RootSubParties>

The <RootSubParties> sub-block will be used within the <RootParties> block in the TradeCaptureReport (AE) and TradeCaptureReportAck (AR) to specify to specify the following information on the trade:

- The branch of the Executing Firm that executed the trade (Optional)
- The branch of Counterparty to a trade (Optional).

Tag	Field Name	Req?	Comment
1120	NoRootPartySubIDs	N	Number of RootPartySubID (1121) and RootPartySubIDType (1122) groups specified below.
→ 1121	RootPartySubID	N	Party sub-identifier. See RootPartySubIDType (1122).
→ 1122	RootPartySubIDType	N	The type of sub-identifier provided in RootPartySubID (1121) 39 – ISO Country Code

7.6 <Instrument>

The <Instrument> component block will be used by Trax as follows:

- For all trades, the security traded will be identified using an ISIN or a concatenated ID

Tag	Field Name	Req?	Comment
48	SecurityID	C	Security identifier value of SecurityIDSource (22) type. Requires SecurityIDSource. Not required when SecurityIDSource (22) = 104.
22	SecurityIDSource	Y	Required if SecurityID (48) is specified. Identifies class or source of the SecurityID (48) value. Supported enumerations: 4 = ISIN 104 = OTHR (Concatenated ID)
107	SecurityDesc	N	Human-readable description of the security. Not supported for inbound messages. Trax will send back the security description held within its instrument reference data on outbound messages.
231	ContractMultiplier	N	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.
996	UnitOfMeasure	N	The unit of measure of the underlying asset upon which the contract is based. All enumerations through FIX.5.0SP2 EP228 are supported.

Tag	Field Name	Req?	Comment
1147	UnitOfMeasureQty	N	Used to indicate the quantity of the underlying commodity unit of measure on which the contract is based, such as, 2500 lbs of lean cattle, 1000 barrels of crude oil, 1000 bushels of corn, etc. UnitOfMeasureQty is required for UnitOfMeasure(996) Variable Quantity UOMs enumerations. Refer to the definition of UnitOfMeasure(996) for more information on the use of UnitOfMeasureQty.
997	TimeUnit	N	Unit of time associated with the contract. Supported enumerations: S = Second Min = Minute H = Hour D = Day Wk = Week Mo = Month Q = Quarter Yr = Year

7.7 <SpreadOrBenchmarkCurveData>

The <SpreadOrBenchmarkCurveData> group is used in the TradeCaptureReport (AE) message to report the price of an underlying benchmark where PriceType (423) = 6 and LastPx (31) is populated with a spread in basis points. The information will also be sent back in the TradeCaptureReportAck (AR) messages. The following fields are supported for the <SpreadOrBenchmarkCurveData> while any other fields from this component block will be ignored:

Tag	Field Name	Req?	Comment
221	BenchmarkCurveName	N	Name of benchmark curve. Only values supported up through FIX 5.0 SP2 EP132 are valid.
222	BenchmarkCurvePoint	N	Point on benchmark curve. Free form values: e.g. "Y", "7Y", "INTERPOLATED".

Tag	Field Name	Req?	Comment
662	BenchmarkPrice	N	Specifies the price of the benchmark.
663	BenchmarkPriceType	N	Identifies type of BenchmarkPrice (662). Supported values are: 1 = Percentage 9 = Yield
699	BenchmarkSecurityID	N	The identifier of the benchmark security, e.g. Treasury against Corporate bond. Requires BenchmarkSecurityIDSource.
761	BenchmarkSecurityIDSource	N	Required if BenchmarkSecurityID (699) is specified. Identifies class or source of the SecurityID (699) value. Supported enumerations: 4 = ISIN

7.8 <TrdCapRptSideGrp>

The <TrdCapRptSideGrp> is used in the TradeCaptureReport (AE) message to report side.

For APA transparency submissions, all trades should be reported as one-side transactions, viewed from the perspective of the party with the transparency reporting obligation (typically the selling party).

Tag	Field Name	Req?	Comment
552	NoSides	Y	Number of Side repeating group instances. 1 = One Side
→ 54	Side	Y	Required when NoSides (552) > 0. Side from the perspective of the party with the reporting obligation. Supported enumerations: 1 = Buy 2 = Sell 7 = Undisclosed

Tag	Field Name	Req?	Comment
→ 1057	AggressorIndicator	N	Optional field used to identify whether the executing party is an aggressor or not in the trade. Supported enumerations: Y = Aggressor N = Passive / Not Aggressor Supported on inbound AE messages and outbound AR messages. Will not be sent on unsolicited AE messages.
→ 29	LastCapacity	Y	Capacity in order execution 1 = Agent (AOTC) 2 = Cross as agent (AOTC) 3 = Cross as principal (MTCH) 4 = Principal (DEAL) 5 = Riskless principal (DEAL)

7.9 <TrdCapRptAckSideGrp>

The <TrdCapRptAckSideGrp> is defined by FIX for use in TradeCaptureReportAck (AR) messages. It's use is identical to that of the <TrdCapRptSideGrp> in TradeCaptureReport (AE) messages, and Trax will populate it using the same rules.

Tag	Field Name	Req?	Comment
552	NoSides	Y	See above under <TrdCapRptSideGrp>
→ 54	Side	Y	See above under <TrdCapRptSideGrp>
→ 1057	AggressorIndicator	N	See above under <TrdCapRptSideGrp>

7.10 <TraxAPAData>

The <TraxAPAData> component block contains custom fields required by the Trax APA service, as well as data provided by the service.

Tag	Field Name	Req?	Comment
22702	TraxResponseText	N	Human readable text containing warning, rejection, or lifecycle messages. Present in unsolicited AE messages carrying trade updates.
22800	TraxDeferralTypeCode	N	Type of deferral used for the trade. Required if TradePublishIndicator indicates deferred publication (1390=2). See section 8.2 for supported values.
	<TraxTransparencyFlags>	N	
22803	TraxDelegatedReportingFlag	N	Indicates if the trade has been reported on behalf of a separate party. Absence of the field implies that the reporting has not been delegated.
22804	TraxAPAStatus	N	Represents the status of the trade in the Trax APA database: PEND – Pending, package trades REJT – Rejected NPUB – Not Published PUBL – Published DEFR – Deferred CANC – Cancelled
22805	TraxEstPubTime	N	The expected date that full details will be published in UTC Time. Only applies to trades that have been deferred with Deferral Type Code = {1, 2, 3, 4, 5, 21, 22, 23}.

7.10.1 <TraxTransparencyFlags>

The <TraxTransparencyFlags> component block contains a repeating block of custom fields to support the MiFID II transparency flag requirements for APA reporting. For all trades where a MiFID II transparency flag has been calculated by Trax, the data will be provided on the AR message. It is not necessary that the trade be published for the flag to be present.

Tag	Field Name	Req?	Comment
22801	TraxNoTransparencyFlags	Y	Number of transparency flags
22802	TraxTransparencyFlag	Y	MiFID II transparency flags

8. Trax Customizations

This section contains the customizations of the standard FIX protocol (as of version 5.0 SP2 EP228) adopted by Trax to support its business logic.

8.1 Extensions to Existing Fields

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22	SecurityIDSource	CHANGE	String	Identifies class or source of the SecurityID (48) value. 104 = OTHR (Concatenated ID) <i>(Security code compliant with MiFID II standardized concatenation requirement)</i>	@Src	

8.2 Custom Fields

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22702	TraxResponseText	New	String	Human readable text containing warning, rejection, or lifecycle messages. Present in unsolicited AE messages carrying trade updates.		<TraxAPADData>

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22800	TraxDeferralTypeCode	New	int	<p>Type of deferral used for the trade.</p> <p><i>Required if TradePublishIndicator indicates deferred publication (1390=2).</i></p> <p>Non-Equity Values:</p> <p>1 = Standard deferral: limited detail publication, but no aggregate publication during deferral. Full details published by 1900 on T+2.</p> <p>2 = Standard deferral: aggregate publication during deferral (on T+1). Full details published by 1900 on T+2.</p> <p>3 = Standard deferral: no publication during deferral. Full details published by 1900 on T+2.</p> <p>4 = Extended deferral: limited detail publication during deferral. Full details published by 0900 on T+4 weeks.</p> <p>5 = Extended deferral: aggregate publication during deferral (following Tuesday). Full details published by 0900 on T+4 weeks.</p>		<TraxAPADData>

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				<p>6 = Extended deferral: limited detail publication during deferral. Full details indefinitely deferred.</p> <p>7 = Extended deferral: aggregate publication during deferral (on T+4 weeks). Full details indefinitely deferred.</p> <p>8 = Indefinite deferral: aggregate publication during deferral (on following Tuesday). Full details indefinitely deferred.</p> <p>10 = Indefinite deferral: limited detail and aggregate publication during deferral (on T+4 weeks). Full details indefinitely deferred.</p> <p>15 = Swedish deferral: limited detail and standard aggregate publication during deferral. Full details published by 0900 on T+4 weeks.</p> <p>Equity Values:</p> <p>21 = 60 Minute delay</p> <p>22 = 120 Minute delay</p>		

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
				23 = Delay until End of Day 24 = Delay until Noon on T+1 25 = Delay until Open on T+1 (Venue Only)		
22801	TraxNoTransparencyFlags	New	NumInGroup	Number of repeating transparency flags.		<TraxTransparencyFlags>
22802	TraxTransparencyFlag	New	string	Repeating field. Any of the MiFID II transparency flag values: TPAC, XFPH, LRGS, SIZE, ILQD, BENC, ACTX, NPFT, CMPR, etc.		<TraxTransparencyFlags>
22803	TraxDelegatedReportingFlag	New	char	Indicates if the trade has been reported on behalf of a separate party. Supported enumerations: T = transaction has been delegated F = transaction has not been delegated		<TraxAPADData>

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22804	TraxAPAStatus	New	char	Represents the status of the trade in the Trax APA database: PEND – Pending, package trades REJT – Rejected NPUB – Not Published PUBL – Published DEFER – Deferred CANC – Cancelled		<TraxAPADData>
22805	TraxEstPubTime	New	int	The expected date that full details will be published in UTC Time. Only applies to trades that have been deferred with Deferral Type Code = {1, 2, 3, 4, 5, 15, 21, 22, 23}.		<TraxAPADData>
22807	TraxPublicationRoutingFlag	New	char	Flag to indicate additional routing during processing: BATS = Send to BATS APA for Equity publication		AE
22808	TraxBatsParticipantID	New	char	Enables routing of post trades to BATS APA. Must be the 4 character Participant ID as assigned by BATS.		AE

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22809	TraxCptySIStatus	New	char	<p>Identifies whether or not the counterparty is an SI, according to the TraxSI registry. This field will not be present if the counterpartySI status is unknown.</p> <p>One of the following: Y = the counterparty is an SI N = the counterparty is not an SI</p> <p>Note that Trax will cater for SI status in different jurisdictions on the basis of the jurisdiction (applicable NCA) the participant is reporting under</p>		AR
22600	TraxNotionalAmount	New	float	Notional Amount or Notional Value; the total value of the traded position's assets.		AE, AR
22601	TraxNotionalCurrency	New	string	String field representing a currency type using ISO 4217 Currency code (3 character) values		AE, AR
22602	TraxRefPerStart	New	UTCDate Only	The start of the period specified in the Directive 2003/87/CE.		AE, AR
22603	TraxRefPerEnd	New	UTCDate Only	The end of the period specified in the Directive 2003/87/CE.		AE, AR

Tag	Field Name	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
22604	TraxEmissionsType	New	char	<p>Required for Emissions Allowances and Emissions Allowance Derivatives. One of the following 4 character codes:</p> <p>EUAE CERE ERUE EUAA OTHR</p>		AE, AR
22688	TraxRootPartyRole Qualifier	New	int	<p>Used to further qualify the role of RootPartyRole(1119).</p> <p>1 = Agent (AOTC) 2 = Cross as agent (AOTC) 3 = Cross as principal (MTCH) 4 = Principal (DEAL) 5 = Riskless principal (DEAL)</p>		<RootParties>

9. Rejection and Warning Codes – Business Validation

This section specifies the various codes for rejections and warnings that can be expected on a response message for where the message does not conform to the business validation rules.

9.1 Rejection Codes

Code	Title	Primary Message
R0000	Missing Field	The following fields were expected and not found:
R0001	B/S Invalid	B/S Indicator is invalid.
R0002	To Be Cleared Invalid	Transaction to be cleared is invalid.
R0003	Deferral Type Invalid	Deferral Type is invalid.
R0004	Missing Publication Flag	If Deferral Type is populated, Publication Flag must be set to D.
R0005	Invalid Executing LEI	Executing LEI should be 20 characters.
R0006	Inactive Executing LEI	The trade date is outside the start/end date of the Executing LEI.
R0007	Executing LEI Not Found	Executing LEI was not found on the client profile.
R0008	Disabled Executing LEI	Executing LEI is not enabled on the client profile.
R0009	Invalid Venue	Venue of execution is not valid.
R0010	Invalid ISIN	ISIN should be 12 characters.
R0012	ISIN not found	ISIN Code not found.
R0013	Invalid IIC Type	Instrument identification code type is not a valid type.
R0014	Qty Greater than Amt Out	Quantity appears erroneous; it is greater than the outstanding amount of the instrument.
R0015	Invalid Quantity	Quantity is not a valid amount.
R0016	Invalid Notional CCY	Notional Currency is not valid.
R0017	Unknown Notional CCY	Notional Currency is not valid.
R0018	Mismatched Notional CCY	Notional currency does not match the issue currency of the instrument.
R0019	Missing Transparency Flag	Client_Pack_ID and Client_Pack_Count are populated, Transparency must contain TPAC or XFPH.
R0020	Duplicate Package ID	The Package ID has already been used for a completed package.
R0021	Invalid Package Count	Number of trades in Package is invalid.
R0022	Invalid Package Ordinal	The ordinal number of the trade within the package is greater than the number of trades in the package.
R0023	Duplicate Package Ordinal	The ordinal number of the trade within the package has already been used.
R0024	Erroneous Price	Price appears erroneous.
R0025	Invalid Price CCY	Price Currency is not valid.

Code	Title	Primary Message
R0026	Unknown Price CCY	Price Currency is not valid.
R0027	Invalid Price Type	Price notation is not a valid type.
R0028	Invalid Publication Flag	Publication Flag is invalid.
R0029	Missing Transparency Flag	The trade was marked for deferral, but no transparency flag was provided.
R0030	Invalid Reporting LEI	Reporting LEI should be 20 characters.
R0031	Inactive Reporting LEI	The trade date is outside the start/end date of the Reporting LEI.
R0032	Reporting LEI not found	Reporting LEI was not found on the client profile.
R0033	Disabled Reporting LEI	Reporting LEI is not enabled on the client profile.
R0034	Future Trade Date/Time	Trading Date and Time is in the future.
R0035	Traded Before Issued	Trading Date and Time is prior to Issue Date.
R0036	Traded After Maturity	Trading Date and Time is after Maturity Date.
R0037	Invalid APA ID	Trax APA ID is invalid.
R0038	APA ID on New	The trade provided contained an APA ID, while the trade is New.
R0039	Missing APA ID	An APA ID is required for Amend and Cancel.
R0040	Unknown APA ID	Trax APA ID not found.
R0041	Invalid Trade Reference	Length of Trade Reference Number is too long.
R0042	Trade Ref not Unique	Trade reference number is not unique for the executing LEI, trade may be a duplicate.
R0043	Invalid Trading Capacity	Trading Capacity is invalid.
R0044	ACTX Not Allowed	The ACTX flag has been used, Client Capacity must not be DEAL.
R0045	Invalid Transaction Type	Transaction Type is invalid.
R0046	Invalid Amend	Trade cannot be amended as it has already been cancelled.
R0047	Invalid Cancel	Trade has already been cancelled.
R0048	Missing Package Fields	TPAC or XFPH flag has been used: Client Package ID and Client Package Count must be populated.
R0049	Invalid Transparency Flag(s)	Transparency flag is not a valid type.
R0050	Invalid Book ID	Length of Book ID is too long
R0051	Invalid Package ID	Length of Package ID is too long
R0052	Invalid Trader ID	Length of Trader ID is too long.
R0053	Invalid Amend	Trade is part of a completed package and Client_Pack_ID cannot be amended.
R0054	Invalid Amend	Trade is part of a completed package and Client_Pack_NO cannot be amended.
R0055	Invalid Amend	Trade is part of a completed package and Client_Pack_Count cannot be amended.
R0056	Missing Deferral Type	The Post-Trade Publication Flag is D, Deferral Type must be populated.

Code	Title	Primary Message
R0057	Flag Mismatch	Transaction Type is New or Cancel, while AMND has been used in Transparency Flags.
R0058	Flag Mismatch	Transaction Type is New or Amend, while CANC has been used in Transparency Flags.
R0059	Mutually Exclusive Flags	Mutually exclusive transparency flags were used.
R0060	Invalid Package Action	The Transaction Type across all trades in a package must match.
R0061	Flag Mismatch	Transaction Type is New, while AMND or CANC has been used in Transparency Flags.
R0062	Incomplete Package	The trade has been rejected; the package is incomplete.
R0063	Venue Mismatch	The venue of execution (MIC) does not match the MIC of the security listing.
R0064	Invalid Package Count	Number of trades in Package do not match.
R0066	Invalid Notional Amount	Notional Amount appears erroneous; it is greater than the outstanding amount of the instrument.
R0067	Invalid Quantity Type	Quantity Type is invalid.
R0068	Invalid Notation of Quantity	Notation of Quantity is invalid.
R0069	Invalid Quantity in Measurement Units	Quantity in Measurement Units is invalid
R0070	Invalid Quantity Multiplier	Quantity Multiplier is invalid.
R0071	Invalid Reference Period Start	Reference Period Start is invalid.
R0072	Invalid Reference Period End	Reference Period End is invalid.
R0073	Invalid Trade Type	Trade Type is invalid.
R0074	Invalid Benchmark Price	Benchmark Price is invalid
R0075	Invalid Benchmark Price Type	Benchmark Price Type is invalid.
R0076	Invalid Benchmark Instrument Code	Benchmark Instrument Code should be 12 characters.
R0077	Invalid Benchmark Instrument Code Type	Benchmark Instrument Code Type is not a valid type.
R0081	Deferral Type Not Allowed	The deferral type specified is not allowed for the asset class of the security.
R0082	Missing Benchmark	Price Type is Spread, but the benchmark is missing.
R0083	Invalid Trading Date and Time	Trading Date and Time is invalid.
R0084	Notional Amount is invalid.	Notional Amount is invalid.
R0085	Invalid Benchmark Curve Point	Benchmark Curve Point exceeds maximum length
R0086	Delegated Reporting Invalid	Delegated Reporting is invalid
R0087	Invalid Number of Trades in Package	Number of Trades in Package is invalid.
R0088	Invalid Message Id	Message Id is invalid.

Code	Title	Primary Message
R0089	Invalid Cpty Trading Capacity	Cpty Trading Capacity is invalid
R0090	Invalid Benchmark Curve Name	Benchmark Curve Name is invalid.
R0091	Invalid Time Unit	Time Unit is invalid.
R0092	Invalid Emission Allowance Type	Emission Allowance Type is invalid.
R0093	Invalid Transparency Flags.	Length of Transparency Flags is too long
R0094	Price is invalid.	Price is invalid
R0095	Invalid Price Condition.	Only one of the following price conditions may be used: NOAP, PNDG
R0096	Invalid Price Condition	Price Type, Price, and Price Currency must not be populated when Price Condition of NOAP or PNDG is used
R0097	Invalid Benchmark	Benchmark must be either an isin or a curve.
R0098	Missing Benchmark ID	Benchmark Code or Code Type missing.
R0098	Missing Benchmark ID	Benchmark Code or Code Type missing.
R0099	Missing Benchmark Curve/Point	Benchmark Curve Name or Curve Point missing
R0099	Missing Benchmark Curve/Point	Benchmark Curve Name or Curve Point missing
R0101	Illegal character found in trade	Illegal character found in trade
R0102	Benchmark ISIN Not Found	Benchmark ISIN Code not found.
R0103	Price Type not Spread	Price Type is not Spread while a benchmark has been provided.
R0104	Missing Counterparty LEI	The counterparty LEI was not provided.
R0105	Cannot amend BATS trade	A trade which was previously sent to BATS may not be amended so that it is not sent to BATS
R0106	Cannot amend non-BATS trade	A trade which was previously not sent to BATS may not be amended so it is sent to BATS
R0107	Cannot amend a previously cancelled BATS trade	A trade which was previously cancelled at BATS may not be amended
R0108	Unknown NCA	NCA is not valid.
R0109	Unknown Executing Firm Branch	Executing Firm Branch Location is not valid.
R0110	Unknown Counterparty Branch	Counterparty Branch Location is not valid.
R0111	Missing Trade id and Reference	One of either Trade Reference or Trax APA ID should be present.
R0112	lbmmq version not valid	lbmmq version is not valid for amd, trade may be old version.
R3001	Invalid Value of MiFIR Identifier	Value of MiFIR Identifier not valid

Code	Title	Primary Message
R3002	Mismatched Asset Class of the Underlying	Asset class of the underlying does not match the enumeration value
R3003	Mismatched Contract Type	Contract type does not match the enumeration value
R3004	Inactive Trading Venue MIC.	The trade date is outside the start/end date of the Trading Venue MIC.
R3006	Invalid Size Related to the Freight Sub Type	Size related to freight sub type should be 25 characters or less.
R3007	Invalid Route or Time Charter Average	Route or time charter average should be 25 characters or less
R3008	Invalid Delivery Cash Settlement Location	Delivery cash settlement location should be 25 characters or less
R3009	Unknown Notional CCY	Notional Currency is not valid
R3010	Mismatched Notional CCY	Notional currency does not match the issue currency of the instrument.
R3011	Mismatched Underlying Type	Underlying type does not match the enumeration value
R3012	Disabled Issuer of Underlying Bond LEI	The trade date is outside the start/end date of the Issuer of underlying bond LEI
R3013	Inactive Issuer of Underlying Bond LEI	Issuer of underlying bond LEI is not enabled on the client profile
R3016	Invalid Notional CCY of the Swaption	Notional Currency of the swaption is not valid.
R3017	Unknown Notional CCY of the Swaption	Notional Currency of the swaption is not valid
R3019	ISIN not found	ISIN not found
R3020	Invalid Inflation Index Name	Inflation index name should be 25 characters or less
R3021	Invalid Reference Rate	Reference rate should be 4 character if index or 25 characters or less if reference rate is not included in the INDEX list
R3022	Mismatched Reference Rate	Reference rate does not match the index enumeration value
R3023	Invalid IR Term of Contract	IR term of contract should be of the format {INTEGER-3}+'DAYS' or {INTEGER-3}+'WEEK' or {INTEGER-3}+'MNTH' or {INTEGER-3}+'YEAR'
R3024	Invalid Contract Sub Type	Contract sub type does not match the enumeration value
R3025	Mismatched Parameter	Parameter does not match the enumeration value
R3026	Invalid Contract Type	Contract sub type does not match the enumeration value
R3028	Invalid Notional CCY1	Notional Currency1 is not valid
R3029	Invalid Notional CCY2	Notional Currency2 is not valid
R3030	Unknown Notional CCY2	Notional Currency2 is not valid
R3031	ISIN for the Underlying Credit Default Swap not found	ISIN for the underlying credit default swap not found

Code	Title	Primary Message
R3032	ISIN for the Underlying Index Code not Found	ISIN for the underlying index code not found
R3033	Invalid Underlying Index Name	Underlying index name should be 25 characters or less
R3034	Invalid Series	Series is invalid
R3035	Invalid Version	Version is invalid
R3036	Invalid Roll Months	Roll Months should be integer number of up to 2 digits in total
R3037	Mismatched Roll Months	Roll Months does not match the enumeration value
R3039	Mismatched Issuer of Sovereign and Public Type	Issuer of sovereign and public type does not match the enumeration value
R3040	ISIN for the Reference Obligation not Found	ISIN for the reference obligation not found
R3041	Invalid Reference Entity	Reference entity should be 2 characters if country code or 6 characters if ISO 3166-2 - 2 character country code followed by dash - and up to 3 alphanumeric character country subdivision code or 20 characters if LEI
R3042	Inactive Reference Entity LEI	The trade date is outside the start/end date of the reference entity LEI
R3043	Reference Entity LEI Not Found	Reference entity LEI was not found on the client profile
R3044	Invalid Reference Entity	Reference entity LEI is not enabled on the client profile
R3046	Invalid Price Multiplier	Price multiplier is invalid
R3047	ISIN for the Underlying Instrument Code not found	ISIN for the underlying instrument code not found
R3048	Invalid Underlying Issuer LEI	Underlying issuer LEI should be 20 characters
R3049	Invalid Underlying Issuer LEI	The trade date is outside the start/end date of the underlying issuer LEI
R3052	Invalid Underlying Index Name	Underlying index name should be 4 characters if index or 25 characters or less if underlying index name is not included in the INDEX list
R3053	Mismatched Underlying Index Name	Underlying index name does not match the index enumeration value
R3054	Invalid Term of the Underlying Index	Term of the underlying index should be of the format {INTEGER-3}+'DAYS' or {INTEGER-3}+'WEEK' or {INTEGER-3}+'MNTH' or {INTEGER-3}+'YEAR'
R3055	Mismatched Option Type	Option type does not match the enumeration value
R3057	Invalid Strike Price CCY	Strike price currency is not valid
R3059	Mismatched Option Exercise Style	Option exercise style does not match the enumeration value
R3060	Mismatched Delivery Type	Delivery type does not match the enumeration value
R3061	Invalid Base Product	Base product should be 4 characters
R3062	Invalid Sub Product	Sub product should be 4 characters
R3063	Invalid Further Sub Product	Further sub product should be 4 characters

Code	Title	Primary Message
R3064	Mismatched Transaction Type	Transaction type does not match the enumeration value
R3065	Mismatched Final Price Type	Final price type does not match the enumeration value
R3066	Invalid Fixed Rate of Leg1	Fixed rate of leg1 is invalid
R3067	Invalid Fixed Rate of Leg2	Fixed rate of leg2 is invalid
R3068	Invalid Float Rate of Leg2	Float rate of leg 2 is invalid
R3069	Invalid IR Term of Contract of Leg2	IR term of contract of leg2 should be of the format {INTEGER-3}+'DAYS' or {INTEGER-3}+'WEEK' or {INTEGER-3}+'MNTH' or {INTEGER-3}+'YEAR
R3070	Mismatched TFX Type	FX type does not match the enumeration value
R3071	Cannot Create Concatenation Id Due to Missing Required Fields	Cannot Create Concatenation Id Due to Missing Required Fields
R3072	Invalid value of Sub Asset class	Cannot Create Concatenation Id Because the Sub Asset Class is Not Supported by RTS 2 & RTS 23
R3073	Invalid value of CFDS Underlying Type	CFDS Underlying Type does not match the enumeration value
R3074	Invalid value of Equity Underlying Type	Equity Underlying Type does not match the enumeration value
R3075	Price outside tolerance	Price is outside Close Price tolerance range
R3076	Volume outside tolerance	Volume is outside Average Daily Volume tolerance range
R3077	Invalid Instrument Code	Must have less than equal to 512 chars and should contain printable ASCII characters from 32 to 126
R3078	Invalid Isins Size	Over 100 ISINs cannot be populated in field Underlying Instrument Code
R3079	Invalid Leis Size	Over 100 LEIs cannot be populated in field Underlying Issue
R3080	Invalid Notional Non Equity	Notional/Nominal Amount is required to be populated with a value above zero
R3081	Previous Version Not Found	Previous Version is required for Amend

9.2 Warning Codes

Code	Title	Primary
W0001	Invalid CP LEI	Counterparty is not valid.
W0002	Inactive CP LEI	Counterparty LEI was not found
W0003	Inactive Ex Venue	Venue of execution does not exist or trade date is outside of the listed period for the venue.
W0004	Pub Flag Mismatch	Publication Flag and transparency rules do not match
W0005	ILQD Mismatch	ILQD transparency flag may not be correct
W0006	LRGS Mismatch	LRGS transparency flag may not be correct

Code	Title	Primary
W0007	SIZE Mismatch	SIZE transparency flag may not be correct
W0008	Deferral Type Mismatch	Deferral type provided does not match the deferral type that applies.
W0009	ISIN not found	Instrument Identification Code not found.
W0010	Responsibility Unknown	Reporting responsibility cannot be determined. Responsibility to report has been assumed.
W0011	No Responsibility	Publication Flag is set to D or Y, but there is no responsibility to report.
W0012	Responsibility to Report	Publication Flag is set to N, but there is a responsibility to report.
W0013	Mismatched Notional CCY	Notional currency does not match the currency of the instrument.
W0014	Incomplete Package	The following trades are pending due to an incomplete package:
W0015	Non-MiFID II	The security is not MiFID II eligible, but the override flag has mandated the trade be published.
W0016	MiFID II	The security is MiFID II eligible, but the override flag has mandated the trade not be published.
W0017	Late Trade	The trade was published more than 15 minutes after execution.
W0018	Late Trade	The trade was published more than 15 minutes after full details were due to be published.
W0020	Delegated LEI Not Set	Delegated reporting has occurred on an LEI that is not set up or not configured for delegated reporting.
W0021	Delegated LEI Mismatch	Trade specifies delegated reporting has not occurred while the LEI is configured for delegated reporting.
W0022	Trading Capacity Mismatch	Transparency flag SIZE was used while trading capacity is not DEAL
W0023	Currency Mismatch	The price currency on the trade does not match listed currencies for the instrument
W0024	Outside Operating Hours	Trade time is outside operating hours for Executing Entity.
W0026	Traded after expired	Trade time is after the expiry date for this security.
W0027	Emission Allowance Type Mismatch	The Emission Allowance Type does not match the type in reference data.
W0028	Price close to tolerance	Price is close to Close Price tolerance
W0029	Volume close to tolerance	Volume is close to Average Daily Volume tolerance
W0030	Erroneous Price	Price appears erroneous.
W0031	Missing Counterparty LEI	The counterparty LEI was not provided.
W0032	Late Trade	The trade was published more than 1 minute after execution.
W0033	Price outside tolerance	Price Check Override flag is set to Y, but price is considered outside tolerance.
W0034	Volume outside tolerance	Volume Check Override flag is set to Y, but volume is considered outside tolerance
W0035	Erroneous Volume	Volume appears erroneous

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