FIX Specifications for the
Trade Reporting and Compliance Engine system
(TRACE®)
Trade Reporting for Treasury Securities

Version 1.3

May 9, 2017

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CONFIDENTIAL

1 Overview

1.1 Introduction

The TRACE System (TRACE) is a service of FINRA that performs two major functions: on-line trade reporting and dissemination. FINRA members (or their designated third parties) are provided with the capability of submitting trade report information on over the counter corporate bond, agency debt and securitized products securities utilizing interactive messaging via FIX protocol. This document describes the formats of the FIX inbound and outbound messages for Treasury Securities, defined hereafter as Treasury Securities (TS), trade reporting to TRACE.

Participants will be able to enter and correct TRACE trades through their FIX interfaces during the TRACE Treasury Securities reconciliation cycle that consists of T-Day through T-1 (business days) entries. Trades that were submitted greater than T-1 are not retained in the TRACE system for trade management purposes. Such trades may be reversed using Reversals or corrected using a combination of a Reversal and new As-of Trade Capture Report.

The Eastern Time operating hours of the TRACE system are as follows:

Market/System open :   8:00 A.M.
Market Close: 5:30 P.M. (for TRACE reporting of Treasury Securities)
System Close: 6:30 P.M.

When a trade is entered into TRACE, a control date and number will be assigned to identify the trade throughout its TRACE processing and a status will be assigned to reflect its processing state. As trades are entered into the system, TRACE will validate trade information, forward proper acknowledgment messages to the Reporting Parties (RP) and Allege messages to the Contra Parties (CP) of the trades. Acknowledgment and Allege messages will contain the terms of the trade, the TRACE assigned status, control date and control number which uniquely identifies each trade. Participants will utilize the combination of TRACE assigned control date and control number to communicate with the TRACE system for subsequent trade report correction processing. Participants may also modify trades using their own assigned reference numbers (Client Trade Identifier) in combination with the TRACE Control Date. Trade reports of Treasury Securities will be retained in the TRACE system on a rolling 2 business day period, inclusive of the day the trade was submitted (T-1) and available for subsequent trade management processing (Cancel or Correction). A Cancel or Correction of a previously reported trade submitted prior to the T-1 period is allowed via submission of a Reversal or a combination Reversal/new As-of trade report.

TRACE will forward proper Notification messages to the trading parties as trades are corrected. Each Notification message will contain the control date, control number and the updated status of the corrected trade.

The TRACE Treasury Securities FIX specifications are applicable to both the T-day and As-of (T+n) trade reporting process. Any trade executed during or off market hours, which has not been reported during T-day, may be reported to TRACE on T+1 or later on an As-of basis.

For questions concerning FIX connectivity, please contact NASDAQ Technical Support at (212) 231-5180 or via email to: tradingservices@nasdaqomx.com. For questions concerning Treasury Securities trade reporting and TRACE, please contact FINRA Product Management at (866) 899-2107 or via email to: FINRAProductManagement@finra.org.

2 FIX Protocol

The messaging described in this specification adheres to the standard FIX 4.4 protocol. Please refer to http://fixprotocol.org/specifications/FIX.4.4 for further details.

The interface follows the FIX specifications as far as possible. In the majority of cases the structure and semantics of the messages are identical to the standard.
In some cases, the protocol has been extended to cover functions not considered by the standard. These extensions are clearly detailed in the document. In other cases, the standard is ambiguous or indicates that the details should be bilaterally agreed between the parties. In these cases this manual provides a detailed description to avoid any possible ambiguity.

2.1   Supported Messages

2.1.1   Administrative messages

Logon (in/out)
Logout (in/out)
Sequence Reset (in/out)
Resend Request (in/out)
Reject (out)
Heartbeat (in/out)
Test Request (in/out)

2.1.2   Application Messages

Trade Capture Report (in)
Trade Capture Report (out)
Trade Capture Report Ack (out)

3 The FIX Session

The session layer conforms to the standard FIX session. Please see the standard FIX specification for additional details.

3.1 CompIDs

The Sender- and TargetCompID uniquely define the FIX session. A session can only be active (established) between two hosts simultaneously. Any attempts to establish a second FIX session using the same CompIDs (for instance to a backup gateway) in parallel will be rejected.

- The TargetCompID (56) on all *inbound* transactions must be set to "FNRA".
- The SenderCompID (49) on all *outbound* transactions will always be set to "FNRA".

The Sender- and TargetCompID used by the client are defined in a separate agreement.

3.2 SubIDs

For *inbound* transactions:
- The TargetSubID (57) must be set to "TS".
- The SenderSubID (50) must be set to the user ID defined in a separate agreement.

For *outbound* transactions:
- The TargetSubID (57) will be set to the user ID (same as inbound SenderSubID).
- The SenderSubID (50) will be set to "TS".

3.3 Logon and authentication

At Logon, clients are identified by:
- CompIDs (SenderCompID and TargetCompID)
- IP Address

When the client is authenticated, the system responds with a Logon message to the client.

3.4 Heartbeat intervals

Heartbeat intervals are negotiated at Logon using the HeartBtInt (108) field. The system accepts a heartbeat interval set to 30 s

3.5 Encryption

The system does not support encryption.

3.6 Datatypes and required fields

This specification does not change the data type on any fields defined in the standard FIX specification. There may be places where this specification restricts the value range of a field further than specified in standard FIX. This will be clearly marked in the spec.

All fields listed in this specification that are marked as required in the standard specification, are required also in this specification. This document specifies additional fields as required by FINRA. These fields are marked with an 'F' in the required column of the message listings.

3.7 Character encoding

Standard FIX 7-bit US-ASCII character encoding is used.

3.8   FIX Timestamps

In FIX all timestamps are expressed in GMT/UTC. Please refer to the standard FIX specification for additional details.

3.9   Session lifetime

The FIX session lifetime is restricted to one trading day. The session lifetime is not ended at connectivity loss or even Logouts. The sequence numbers are reset to one each morning.

3.10 Failover and message recovery

At reconnect and Logon standard FIX message recovery is performed. All FIX sessions have at least one primary and one secondary gateway to which the session states are fully replicated. This means that regardless to which gateway a client connects, full message recovery is provided.
A client cannot have the same FIX session active towards multiple gateway instances simultaneously.

3.11 FIX Session Level Test Cases

This implementation is fully compliant with the session-level test cases specified in the standard FIX 4.4 Specification, Volume 2, section "FIX Session-level Test Cases and Expected Behaviors". The only exception is the encryption test cases.

3.12 Drop Copy Sessions

Drop Copy Sessions, or Drops, can be set up to mirror outbound traffic on one or more FIX sessions. All outbound Quote Status Reports will be seen on the Drop.
Drop Copy Sessions are separate FIX sessions from the sessions which it replicates. This means the Drop session will have its own CompIDs, so the copied messages will differ slightly from the originals. All copied messages will have the CopyMsgIndicator (797) tag set to "Y".
Note that this is an extension to standard FIX where only Execution Reports and Trade Capture Reports can be copied to a drop.

3.13 The Standard Header

All FIX messages contain a Standard Header. The header contains important information such as session identifiers (CompIDs), sequence numbers and message type and length etc.

3.13.1 Inbound Header

Tag	FIX Field name	Req'd	Comment
8	BeginString	Y	
9	BodyLength	Y	
35	MsgType	Y	
49	SenderCompID	Y	As specified in separate agreement
50	SenderSubID	F	Your User ID as defined in separate agreement.
56	TargetCompID	Y	Valid values: "FNRA"
57	TargetSubID	F	Valid values: "TS"
34	MsgSeqNum	Y	
43	PossDupFlag		Always required for retransmitted messages
97	PossResend		
52	SendingTime	Y	Time of message transmission (always expressed in UTC (Universal Time Coordinated, also known as "GMT"))
115	OnBehalfOfCompID		If present, this MPID will be passed to the TS application. If not present, the value in Tag 49 will be passed to the

			application. This allows you to use multiple MPIDs through a single connection. For Service Bureaus, if you are sending this message on behalf of your customer, their 4-character MPID is placed here. For both Broker Dealers and regular connections, you can use this field to submit your customer's MPID. This value will be returned to you in Tag 128 on the outbound message. Please note that while it is possible for you to submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so.
116	OnBehalfOfSubID		For both Broker Dealer and regular connections, you can use this field to submit your customer's I1I2 (assigned by NASDAQ upon agreement). This value will be returned to you in Tag 129 on the outbound message. Please note that while it is possible for you to submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so.
122	OrigSendingTime		

3.13.2 Outbound Header

Tag	FIX Field name	Req'd	Comment
8	BeginString	Y	
9	BodyLength	Y	
35	MsgType	Y	
49	SenderCompID	Y	Set to "FNRA"
50	SenderSubID	F	Set to "TS"
56	TargetCompID	Y	As specified in separate agreement
57	TargetSubID	F	Your User ID as defined in separate agreement.
34	MsgSeqNum	Y	
43	PossDupFlag		Always required for retransmitted messages
97	PossResend		
52	SendingTime	Y	Time of message transmission (always expressed in UTC (Universal Time Coordinated, also known as "GMT"))
122	OrigSendingTime		
128	DeliverToCompID		Your MPID as stated in Tag 115 in the inbound message is returned to the service bureau in this tag.
129	DeliverToSubID		Your I1I2 as stated in Tag 116 in the inbound message is returned to the service bureau in this tag.

3.14 The Standard Trailer

All FIX messages end with a Standard Trailer. The trailer only includes a simple checksum field. The details on how to calculate the checksum can be found in the standard FIX specification.

Tag	FIX Field name	Req'd	Comment
10	CheckSum	Y	

3.15 Message Details

3.15.1 How to interpret the Required (Req'd) column

A 'Y' marks the field as required in standard FIX (and of course also in this implementation). An 'F' means that the field is required in this implementation although it is not required in standard FIX. No entry at all means the field is optional.

3.15.2 Default values

Fields which has enumerated values, where one is marked as "default value" need not be included in the message at all if the default value is used.

3.15.3 Logon – inbound to FINRA

The response to a logon is either a Logon, which denotes a successful logon, or a Logout.
A client must be prepared to handle failure scenarios including (but not limited to):
A Logon attempt may fail or be rejected for several reasons. The FIX gateway will react differently depending on the kind of failure. The two different actions it may take are:
Silently ignore the Logon.
- If the wrong Sender or Target CompID is specified.
- For other reasons specified in the standard FIX specifications.

Respond with a Logout.
- If the FIX gateway has no connection with the back-end system.
- Logon failure for other reasons than authentication/security.

The Logout response to a Logon will always contain a note on why in the Text (58) field.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = A
98	EncryptMethod	Y	Encryption not supported. Valid values: 0 = None / Other
108	HeartBtInt	Y	Heartbeat interval. Valid value: 30 s
	Standard Trailer	Y	

3.15.4 Logon – outbound from Marketplace

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = A
98	EncryptMethod	Y	Encryption not supported. Valid values: 0 = None / Other
108	HeartBtInt	Y	Heartbeat interval. Valid value: 30 s
	Standard Trailer	Y	

3.15.5 Logout (in/out)

The Logout message is used to gracefully disconnect a FIX session. When receiving a Logout, the counterparty should respond with a Logout. A Logout can also be the response to an unsuccessful Logon attempt.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 5
58	Text		Free text
	Standard Trailer	Y	

3.15.6 Sequence Reset (in/out)

This message has two uses. The common usage is with GapFillFlag set to 'Y', which is used in a response to a Resend Request to indicate that a range of messages will not be resent. This is commonly used to avoid resending administrative messages like Heartbeats.

The other (very rare) usage is to reset the sequence numbers to a higher number to get out of a deadlock. This is only triggered by manual intervention.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 4
123	GapFillFlag		Indicates that the Sequence Reset message is replacing administrative or application messages which will not be resent.
36	NewSeqNo	Y	New sequence number. The next Sequence Number to be expected after this message.
	Standard Trailer	Y	

3.15.7 Resend Request (in/out)

Resend Request is used to recover messages when a sequence number gap has been detected.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 2
7	BeginSeqNo	Y	Message sequence number of first message in range to be resent
16	EndSeqNo	Y	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo (7) = EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = "0" (representing infinity).
	Standard Trailer	Y	

3.15.8 Reject (out)

The Reject, or session-level reject, message is sent whenever the FIX gateway is able to at least partially parse the message, but the message does not adhere to the specification and cannot be delivered to the back-end system.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 3
45	RefSeqNum	Y	MsgSeqNum of rejected message
371	RefTagID		The tag number of the FIX field being referenced.
372	RefMsgType		The MsgType of the FIX message being referenced.
373	SessionRejectReason	F	Valid values: 0 = Invalid Tag Number 1 = Required Tag Missing 2 = Tag Not Defined For This Message Type 3 = Undefined Tag 4 = Tag Specified Without a Value 5= Value Is Incorrect Out Of Range For This Tag 6 = Incorrect Data Format For Value 9 = CompID Problem 10 = Sending Time Accuracy Problem 11 = Invalid Msg Type 99 = Other
58	Text		Where possible, message to explain reason for rejection
	Standard Trailer	Y	

3.15.9 Heartbeat (in/out)

A heartbeat message is sent at the interval set at Logon. It is also the response to a Test Request message.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 0
112	TestReqID		Required when the heartbeat is the result of a Test Request message.
	Standard Trailer	Y	

3.15.10 Test Request (in/out)

Test Request is used to "ping" the counterparty whenever a heartbeat has not arrived at the negotiated heartbeat interval.

Tag	FIX Field name	Req'd	Comment
	Standard Header	Y	MsgType = 1
112	TestReqID	Y	Identifier included in Test Request message to be returned in resulting Heartbeat
	Standard Trailer	Y	

4 General Trade Reporting in FIX

4.1 Introduction

Trades may, subject to regulations or bilateral agreement, be reported to the marketplace in the following cases:

- Trades negotiated between market participants without using execution mechanisms provided by the Marketplace
- Trades formed at other execution venues but reported to the marketplace for regulatory or publication reasons. Such execution venues may include (systematic) internalizers, ECN's, ATS's, and others regulated markets. *(Not supported in this solution)*

4.2 Trade Capture Report Processing

For exchanges, Trade Capture Reports (TCR) have two related purposes; to confirm trades and reporting of privately negotiated trades. Usage of tags differs slightly depending on the purpose of the message:

The confirmed Trade:
Identifier: **TradeID**
Action: **TradeReportType**

The process of confirming a trade:
Identifier: **TradeReportID**. Each actor issues their own id for every message sent (excluding TCR Ack messages). To reference a previous message, the **TradeReportRefID** tag is used.

- An initiator always uses TradeReportRefID when referring to a previous report.
- The marketplace uses TradeReportRefID in confirmed trades to reference external actors previous TradeReportIDs.
- The counterparty uses TradeReportRefID in Accept/Decline messages to reference TradeReportIDs set by the marketplace in Alleged transactions.

Action: **TradeReportTransType**

4.3 As-Of Trades

In FIX, an As-Of Trade is submitted by setting the TradeDate field to the date when the trade occurred and setting the AsOfIndicator (1015) to 1. An original T Date Trade is reported by setting TradeDate to the current date and setting the AsOf Indicator to 0 or omitting the tag.

4.4 Reversals

A deletion of a previously reported trade submitted on a prior day is allowed via submission of a *Reversal*. This message is used to cancel a TRACE trade entry which was originally reported prior to the rolling T-1 day period. A Reversal must contain all the values submitted in the original Trade. The exception is the original trade identifier (in field TradeReportRefID), which is not required, and will not be used as a basis to look up the original trade. See section 5.1.3 for message details. Firms wishing to correct a TRACE trade entry which was originally reported prior to the rolling T-1 day period are required to submit a Reversal, followed by an As-Of Trade with the correct trade details.

4.5 Identifiers

4.5.1 Trade Report ID

The TradeReportID (571) is similar to the ClOrdID used for orders and executions. A unique Trade Report ID must be set on all reported trades (TCR) inbound to the marketplace. There is one important exception to the analogy of ClOrdIDs. The marketplace sets its own TradeReportIDs on outbound TCRs (like confirmed trades).

4.5.2 Trade Report Reference ID

The TradeReportRefID (572) is used to refer to a previous TCR. A submitter of a reported trade can use TradeReportRefID in subsequent corrections (with the exception of Reversals) to the reported trade. The marketplace, which sets its own TradeReportIDs on outbound trade confirmations, uses the TradeReportRefID to reference *the submitters TradeReportID* from the original trade report, for example on confirmations to reported trades. Note that this tag is optional on inbound messages to FINRA, and that either TradeID or FirmTradeID is required to correct a trade.

4.5.3 Trade ID

TradeID (1003) is a FINRA extension to FIX 4.4. TradeID carries the ten digit Control Number which the TRACE System had assigned to the TRACE trade when it was accepted by the TRACE System.

4.5.4 FirmTrade ID

FirmTradeID (1041) contains the internal ID assigned to a trade by the reporting party (Client Trade Identifier). Must not exceed 20 characters. A firm can use their Client Trade Identifier to subsequently Cancel or Correct a trade (in lieu of Trade ID/FINRA Control Number. Control Date would still be required). If used, firms must ensure uniqueness of their reference numbers every day.

4.5.5 Original Trade ID

OrigTradeID (1126) is a FINRA extension to FIX 4.4. OrigTradeID carries the ten digit control number which the TRACE System had assigned to the TRACE trade when it was originally accepted by the TRACE System.
This is the equivalent of the CTCI Original Control Number.

4.5.6 Secondary Firm Trade ID

SecondaryFirmTradeID (1042) is a FINRA Extension to FIX 4.4. It contains the internal ID assigned to a trade by the contra side (Contra Client Trade Identifier). This field can only be submitted on Locked-In trades.

4.5.7 Party Identifiers

There may be many parties involved in a trade. In FIX, the identifiers and roles of each party is defined in the Parties block. The Parties block is a repeating group of identifiers which can carry an unlimited number of parties and their roles. The Parties block consists of the following fields:

Tag	FIX Field name	Comment
453	NoPartyIDs	Number of parties included in the message
448	PartyID	The actual identifier of the party. In this case always the 4 character MPID on interdealer trades. On Customer trades, the contra party must be submitted with the value "C". On Affiliate trades, the contra party must be submitted with the value "A"[1].
447	PartyIDSource	Defines the type of the identifier used as PartyID. In this solution always C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
452	PartyRole	Defines the role of the current party.

The last three fields listed above are required for each party.

The following party roles are supported:

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[1] An affiliate is a non-member entity that controls, is controlled by or is under common control with a FINRA member, as further defined under FINRA Rule 6710.

Party Role	Comment
Giveup Firm	MPID of the Giveup Firm, when applicable. A TRACE Service Bureau/Executing Broker Supplement (Attachment B of the TRACE Participation Agreement) must be in place in order for firms to submit trade reports on behalf of their give ups. Can be set for the Contra party only if the reporting firm submits the trade as a Locked-in trade.
Executing Firm	MPID of Reporting party (owner of the trade).
Entering Firm	MPID of the party (Service Bureau) sending the trade on behalf of a client. A TRACE Service Bureau/Executing Broker Supplement (Attachment B of the TRACE Participation Agreement) must be in place in order for firms to submit trade reports on behalf of their correspondents.
Clearing Firm	Clearing Firm Number. Not really a party but treated as such in FIX.
Contra Firm	MPID of Contra party or "C" to denote the contra is a non-FINRA member (Customer trade) or "A" to denote the contra is a non-member affiliate (Affiliate trade).

In addition to the above three main party identifier fields, there is also a Parties Sub identifier group that may be added to certain parties. This group contains the following fields:
- **NoPartySubIDs** (802) – Number of Party sub identifiers. In this solution always set to 1 if present.
- **PartySubID** (523) – The actual Party Sub Identifier. In this solution only used for identifying a branch office of a reporting party or a contra party (Contra party branch office may only be submitted on Locked-In trades).
- **PartySubIDType** (803) – Type of sub identifier. In this solution always set to 24 = Department.

The Parties sub identifiers are only allowed to be attached to the reporting party or to the contra party (on Locked-In trades).

In this solution the Trade Capture Reports contains one set of parties for each Side (Buy/Sell) of the trade. The parties are found in the repeating group called TrdCapRptSideGrp. This group will always contain two sides (NoSides = 2), one buy and one sell[2]. Each of these contains a Parties repeating group.
- The reporting side (buy or sell) *must* contain a PartyID with PartyRole = Executing Firm.
- The contra side (opposite of reporting side) *must* contain a PartyID with PartyRole = Contra Firm.

PartyIDs with other Party Roles may be added as necessary to both sides.
See chapter 8 **for examples on how to populate the Party identifier fields.**

4.5.8   Trades reported by a Service Bureau

In order to report trades as a Service Bureau, you would need to utilize the "On Behalf Of" FIX functionality. In the header of the message, you must include Tags 115 (OnBehalfOfCompID) and 116 (OnBehalfOfSubID). Tags 128 (DeliverToCompID) and 129 (DeliverToSubID) will be returned in the outbound messages to you. You will set up a standard FIX session with your MPID. For additional clients, the port will be turned into a service bureau port and client connections can be added to it. In order for you to send trade reports on behalf of these clients, you must send Tags 115 and 116 with the corresponding values given to you by NASDAQ for each client.
Note: A fully executed Uniform Service Bureau/Executing Broker Agreement (Attachment A of the Agreement) must be in place in order for service bureaus to submit trade reports on behalf of their clients.

Here is a sample set up of a service bureau port with multiple clients (MPIDs, I1I2s and port used for illustrative purposes):

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[2]   The exception is Trade Cancels, which only contains one side (the reporting side).

Tag 49   SenderCompID: WXYZ (Service Bureau MPID)
Tag 50   SenderSubID: 1111
Tag 56   TargetCompID: FNRA
Tag 57   TargetSubID: TS
Port: 12345

Client #1
Tag 115 OnBehalfOfCompID: ABCD
Tag 116 OnBehalfOfSubID: 2222

Client #2
Tag 115 OnBehalfOfCompID: EFGH
Tag 116 OnBehalfOfSubID: 3333

Client #3
Tag 115 OnBehalfOfCompID: IJKL
Tag 116 OnBehalfOfSubID: 4444

Client #4
Tag 115 OnBehalfOfCompID: MNOP
Tag 116 OnBehalfOfSubID: 5555

4.6   Timestamps and dates

Timestamps and dates can be represented in several ways in FIX. The data types used in this solution are:

Data Type	Format	Comment
UTCTimestamp	YYYYMMDD-HH:MM:SS	The most common data type in FIX. Used in standard FIX tags such as TransactTime (60), SendingTime (52) etc. **NOTE 1:** times are given in **UTC** (GMT).
LocalMktDate	YYYYMMDD	Standard date. Notice that it is **NOT** in UTC. Used in standard tags such as TradeDate (75).
UTCTimeOnly	HH:MM:SS	Basically the time part of a UTCTimestamp. **NOTE 1:** times are given in **UTC** (GMT). NOTE 2: Treasury reporting tag 22007, Execution Time, allows millisecond and microsecond reporting. Format HH:MM:SS.sss.mmm

4.6.1   TransactTime

TransactTime (60) is a standard FIX tag that is set to the time the transaction it is contained in occurred.
Note: TransactTime is a FIX required field and is not used by TRACE in trade data validation.
Format: UTCTimestamp

4.6.2   SendingTime

SendingTime (52) is contained in the header of every FIX message and must contain the time of message transmission.
Format: UTCTimestamp

4.6.3   TradeDate

TradeDate (75) is used to indicate the date the trade occurred (aka Execution Date).
Note: On non-As-Of trades, the Trade Date cannot be changed on a Correction submission to a different date than what was originally submitted. Firms would be required to Cancel the original trade and resubmit a new Trade Report with the intended Trade Date.

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On As-Of trades, the Trade Date can be changed only to a date prior to the original trade date. The Trade Date cannot be changed to a date that is subsequent to the original trade date. In the case of the latter, firms would be required to Cancel the original trade and resubmit a new As-Of Trade Report with the intended Trade Date.
Format: LocalMktDate

4.6.4   ExecutionTime

ExecutionTime (22007) is a field defined by FINRA. It denotes the time of execution, format HH:MM:SS.sss.mmm. Outbound messages contain the value set in the inbound message.
Format: UTCTimeOnly

4.6.5   PreparationTime

PreparationTime (22009) is an optional field defined by FINRA. Denotes the time the submitter prepared the transaction for submission. Outbound messages contain the value set in the inbound message.
It is a standard FIX UTCTimestamp formatted field containing both date and time in UTC formatted as described above.
Format: UTCTimeOnly

4.6.6   ControlDate

ControlDate (22011) is a field defined by FINRA. When a trade is submitted to TRACE and accepted, the system will return a ControlDate with the trade acknowledgement. The ControlDate reflects the date when the system received and processed the trade entry. The ControlDate together with the Control Number (TradeID) uniquely identifies a trade. Control Date is required in conjunction with Control Number (TradeID) or FirmTradeID (Client Trade Identifier) to subsequently cancel or correct a trade.
Format: LocalMktDate

4.6.7   OrigControlDate

OrigControlDate (22012) is a field defined by FINRA. When a trade is submitted to TRACE and accepted, the system will return a ControlDate with the trade acknowledgement. The OrigControlDate reflects the date when the system received and processed the *original* trade entry. It is found on trade correction acknowledgements.
Format: LocalMktDate

4.6.8   ServiceBureauPrepTime

ServiceBureauPrepTime (22022) is an optional field defined by FINRA. If a participant firm used a Service Bureau to submit the trade, this field denotes the time the Service Bureau prepared the transaction for submission. Outbound messages contain the value set in the inbound message.
Format: UTCTimeOnly

5 Message Formats

5.1 Inbound Trade Report Messages

5.1.1 Trade Capture Report – Reporting a trade (in)

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
571	TradeReportID	Y	Client-generated identifier for FIX messaging, not to exceed 20 characters.
1041	FirmTradeID		The client identifier assigned to a trade by the firm to track a trade within the firm's system. Must be unique for the day.
1042	SecondaryFirmTradeID		*FINRA Extension to FIX 4.4:* The Contra Client Identifier assigned to a trade by the contra side. Only used for Locked-in Trade Reports.
487	TradeReportTransType	F	Valid values: 0 = New
856	TradeReportType	F	Valid values: 0 = Submit
570	PreviouslyReported	Y	Indicates if the trade capture report was previously reported to the counterparty Valid values: N = No
1015	AsOfIndicator		Used to indicate that a trade was submitted "as of" a specific trade date. Valid values: 0 = false – trade is not an AsOf trade (default) 1 = true – trade is an AsOf trade.
48	Instrument/SecurityID	Y	Either transaction must contain either CUSIP or Symbol to identify the security. If CUSIP is given, set SecurityIDSource to 1. If Symbol is given, set it to 8.
22	Instrument/SecurityIDSource		Type of identifier given in SecurityID. Valid values: 1 = CUSIP 8 = Exchange Symbol
32	LastQty	Y	Trade Volume. Format: nnnnnnnnnnn.nn
31	LastPx	Y	Trade Price. Format: nnnn.nnnnnnnnnnn
423	PriceType	F	The type of price reported. Valid values: 98 = Decimal Unit Price 9 = Yield 97 = Negative Yield
9854	OverrideFlag		*FINRA Extension to FIX 4.4.* Valid values: Y = Yes N = No (default value) Price override may only be submitted after the initial trade report is rejected due to price out of range.
75	TradeDate	Y	Interpreted as an As-Of trade if not current date. Format: YYYYMMDD
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63	SettlType		When Issued Indicator. Used to indicate whether the

						trade was executed before the issuance of the security, i.e., "when-issued" trading. 7 = When Issued
	64	SettlDate			F	Specific date of trade settlement (SettlementDate) in YYYYMMDD format. Required for all transaction.
	552	TrdCapRptSideGrp/NoSides			Y	Always set value to 2. One side for the Reporting party and one side for the Contra party.
→	54	Side			Y	Side of trade. Valid values: 1 = Buy 2 = Sell
→	37	OrderID			Y	Required in FIX, but ignored
→	453	Parties/NoPartyIDs			F	Number of parties on the reporting/contra side of the trade
→	→	448	PartyID			F	Identifier for the type of party defined in PartyRole. Either an MPID or a Clearing Firm number or "C" for customer or "A" for affiliate on the contra side.
→	→	447	PartyIDSource			F	Valid values : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→	452	PartyRole			F	Valid values: 1 = Executing Firm 14 = Giveup Firm 17 = Contra Firm 83 = Clearing Firm
→	→	802	NoPartySubIDs				PartySubID is only allowed for PartyRole = 1 or 17. Only 1 is allowed (branch office of executing/contra firm)
→	→	→	523	PartySubID			Sub-identifier. Branch office of executing/contra firm (Branch Sequence/Contra Branch Sequence) Contra PartySubID may only be entered on Locked-In trades.
→	→	→	803	PartySubIDType			Type of PartySubID (523) value Valid values: 24 = Department
→	528	OrderCapacity			F	Designates the capacity of the reporting/contra party. Valid values: A = Agency P = Principal Required on the reporting side. Contra side is required on all Locked-In trades.
→	12	Commission				Buyer's/Seller's Commission (in dollars). Required when Commission has been charged on an Agency capacity. Format: nnnnnn.nn Both commissions may only be submitted on Locked-In trades.
→	13	CommType				Buyer's/Seller's Commission type. Valid values: 3 = Absolute
→	58	Text				User Memo Only on the Reporting Party side. Will not be displayed to Contra party. Not to exceed 10 characters.
	22006	SpecialPriceIndicator				Special Price Indicator. Valid values:

			Y = Special price N = No special price (default)
5149	Memo		*FINRA Extension to FIX 4.4.* Special Price Reason. A fifty character alphanumeric subscriber MEMO field. Required when the field Special Price Indicator = Y. To describe the reason why the trade was executed at a special price. This field may be displayed to the Contra party.
22013	LockedInIndicator		*FINRA Extension to FIX 4.4.* Indicates that the firm entering the trade is reporting for both sides of the trade. This occurs when two of its give-ups trade with each other (Two-sided giveup) or the firm trades with one of its own give-ups (One-sided giveup). Valid values: Y = Yes N = No (default value) All Locked-In trades MUST be reported from the seller's perspective, i.e., the reporting party must be the sell side and the contra party must be the buy side. A TRACE Service Bureau/Executing Broker Supplement (Attachment B of the TRACE Participation Agreement) must be in place in order for firms to submit trade reports on behalf of their give ups and as Locked-In trades.
22005	SpecialProcessingFlag		This field allows a trade to be marked for special processing. Under certain conditions, use of this field for special processing purposes MUST be authorized by FINRA Operations prior to submission of trades. Authorization will be granted on a trade by trade basis. Valid values: N = No Special Processing (default) Y = Position Transfer (*authorization required*) A = Affiliate – principal transaction indication Note: As defined in FINRA Rule 6730 (d)(4)(E), the affiliate principal transaction indication should be used where a member purchases or sells a security and, within the same trading day, engages in a back-to-back trade with its non-member affiliate in the same security at the same price (without a mark-up or commission assessed). This will suppress the trade from dissemination.
22001	TradeModifier1		*FINRA Extension to FIX 4.4. Reserved for future use.*
22002	TradeModifier2		*FINRA Extension to FIX 4.4. Reserved for future use.*
22004	TradeModifier4		*FINRA Extension to FIX 4.4.* Required indicator if a trade falls under one of the following transaction types (otherwise the field must not be set): W = Weighted Average Price S = If the transaction is part of a series of transactions and may not be priced based on the current market. B = if the transaction is part of a series of transactions where one or more transactions involve a futures contract (e.g., a basis trade).
22007	ExecutionTime	F	Execution time (in **UTC/GMT**). Format:

			HH:MM:SS.sss.mmm
22009	PreparationTime		Time of trade submission (in **UTC/GMT**). Format: HH:MM:SS
22034	NoRemunerationIndicator		*FINRA Extension to FIX 4.4.* As outlined in FINRA Rule Filing SR-FINRA-2015-026, this field indicates whether compensation in the form of mark-up, mark-down or commission is included in the price. N = The transaction does not include remuneration (mark-up/down or commission). Omission of this tag indicates the transaction does include remuneration (a mark-up/down or commission). Note: Use/entry of this tag is only supported for Customer and Affiliate trades (Contra party = "C" or "A") and is not allowed on Inter-dealer trades.
22036	ATSExecutionMPID		*FINRA Extension to FIX 4.4.* Used to identify the Alternative Trading System (ATS) on which an exempted transaction, as defined in SR-FINRA-2015-055, was executed. In such cases, enter the 4-character MPID of the ATS, otherwise omit this tag.
	Standard Trailer	Y	

5.1.2 Trade Capture Report – Trade Cancel (in).

To be used only for T Date through T-1 cancels. Unless otherwise noted, all fields follow
rules/definitions as outlined in the Comments column of the Trade Capture Report inbound
message (5.1.1).

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
571	TradeReportID	Y	Unique FIX client-generated identifier
1041	FirmTradeID		ClientTradeID can be used to cancel a trade in lieu of TRACE Control Number (TradeID).
1003	TradeID		TradeID of report to cancel (contains TRACE control number). Alternative to FirmTradeID to identify the original trade.
22011	ControlDate	F	Control Date of the original trade. Used together with TradeID or FirmTradeID to identify the trade to be cancelled. Format: YYYYMMDD
487	TradeReportTransType	F	Valid values: 1 = Cancel
856	TradeReportType	F	Valid values: 6 = Cancel
570	PreviouslyReported	Y	Indicates if the trade capture report was previously reported to the counterparty. Required in FIX, but ignored in cancels. Valid values: N = No
1015	AsOfIndicator		Used to indicate that a trade was submitted "as of" a specific trade date. Valid values: 0 = false – trade is not an AsOf trade (default) 1 = true – trade is an AsOf trade.
48	Instrument/SecurityID	Y	Either transaction must contain either CUSIP or Symbol to identify the security. If CUSIP is given, set SecurityIDSource to 1. If Symbol is given, set it to 8.
22	Instrument/SecurityIDSource		Type of identifier given in SecurityID. Valid values: 1 = CUSIP 8 = Exchange Symbol
32	LastQty	Y	Required in FIX, but ignored in cancels. Can be set to zero.
31	LastPx	Y	Required in FIX, but ignored in cancels. Can be set to zero.
75	TradeDate	Y	Required in FIX but ignored.
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
552	TrdCapRptSideGrp/NoSides	Y	For Trade Cancels this must always be set to 1.
→ 54	Side	Y	Side of trade. Valid values: 1 = Buy 2 = Sell **NOTE: on a Cancel of a trade submitted on a prior day (T-1) the value "1" will always be returned in Tag**

					54 on the TSCX confirmation regardless of the value submitted.
→		37	OrderID	Y	Required in FIX, but ignored
→		453	Parties/NoPartyIDs	F	Number of parties. Must always be set to 1.
→	→	448	PartyID	F	Identifier (MPID) for the reporting/executing party of the original trade to be cancelled.
→	→	447	PartyIDSource	F	Valid values : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→	452	PartyRole	F	Valid values: 1 = Executing Firm
	Standard Trailer			Y	

5.1.3 Trade Capture Report – Reversal (in)

To be used only for trades submitted prior to the T-1 period. Unless otherwise noted, all fields follow rules/definitions as outlined in the Comments column of the Trade Capture Report inbound message (5.1.1).

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
571	TradeReportID	Y	Client-generated identifier for FIX messaging, not to exceed 20 characters.
1041	FirmTradeID		The client identifier assigned to the original trade by the firm.
1042	SecondaryFirmTradeID		*FINRA Extension to FIX 4.4:* The Contra Client Identifier assigned to the original trade by the contra side. Only used for Locked-in Trade Reports.
22012	OrigControlDate	F	Control Date of the original trade.
1126	OrigTradeID	F	TRACE Control Number of the original trade.
487	TradeReportTransType	F	Valid values: 4 = Reverse
856	TradeReportType	F	Valid values: 0 = Submit
570	PreviouslyReported	Y	Indicates if the trade capture report was previously reported to the counterparty Valid values: N = No
1015	AsOfIndicator	F	Valid value: 1 = true – trade is an AsOf trade.
48	Instrument/SecurityID	Y	Either transaction must contain either CUSIP or Symbol to identify the security. If CUSIP is given, set SecurityIDSource to 1. If Symbol is given, set it to 8.
22	Instrument/SecurityIDSource	F	Type of identifier given in SecurityID. Valid values: 1 = CUSIP 8 = Exchange Symbol
32	LastQty	Y	Trade Volume from original trade.
31	LastPx	Y	Trade Price from original trade.
423	PriceType	F	Price type from original trade.
9854	OverrideFlag		Price override from original trade.
75	TradeDate	Y	TradeDate from original trade.
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63	SettlType		SettlType from original trade.
64	SettlDate	F	SettlDate from original trade.
552	TrdCapRptSideGrp/NoSides	Y	Always set value to 2. One side for the Reporting party and one side for the Contra party.
→ 54	Side	Y	Side of trade. Valid values: 1 = Buy 2 = Sell
→ 37	OrderID	Y	Required in FIX, but ignored
→ 453	Parties/NoPartyIDs	F	Number of parties on the reporting/contra side of the trade
→ → 448	PartyID	F	Identifier(s) used in the original trade.

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→	→		447	PartyIDSource	F	Valid values : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→		452	PartyRole	F	Valid values: 1 = Executing Firm 14 = Giveup Firm 17 = Contra Firm 83 = Clearing Firm
→	→		802	NoPartySubIDs		PartySubID is only allowed for PartyRole = 1 or 17. Only 1 is allowed (branch office of executing/contra firm)
→	→	→	523	PartySubID		Sub-identifier. Branch office of executing/contra firm (Branch Sequence/Contra Branch Sequence) Contra PartySubID may only be entered on Locked-In trades.
→	→	→	803	PartySubIDType		Type of PartySubID (523) value Valid values: 24 = Department
→			528	OrderCapacity	F	OrderCapacity from the original trade. Required on the reporting side. Contra side is required on all Locked-In trades.
→			12	Commission		Commission(s) from the original trade.
→			13	CommType		Buyer's/Seller's Commission type. Valid values: 3 = Absolute
→			58	Text		User Memo Only on the Reporting Party side. Will not be displayed to Contra party.
			22006	SpecialPriceIndicator		Special Price Indicator from the original trade.
			5149	Memo		Memo from the original trade.
			22013	LockedInIndicator		Locked In Indicator from the original trade.
			22005	SpecialProcessingFlag		Special Processing Flag from the original trade.
			22004	TradeModifier4		**TradeModifier4 from the original trade.**
			22007	ExecutionTime	F	Execution Time from the original trade.
			22009	PreparationTime		Time of trade reversal submission (in **UTC/GMT**). Format: HH:MM:SS
			22034	NoRemunerationIndicator		No Remuneration Indicator from the original trade.
			22036	ATSExecutionMPID		ATS Execution MPID from the original trade.
				Standard Trailer	Y	

Please note: in order to correct a trade report submitted prior to the T-1 period, firms must submit a Reversal, followed by a new As-Of Trade Capture Report (as outlined in section 5.1.1) containing the correct trade data. Separate confirmations (TSHX and TSEN) will be returned for each submission.

5.1.4 Trade Capture Report – Trade Correction (in)

To be used only for T Date through T-1 corrections. Unless otherwise noted, all fields follow rules/definitions as outlined in the Comments column of the Trade Capture Report inbound message.

NOTE: A successful Correction transaction will result in a new TradeID being generated. The acknowledgement (TSCR) will contain the original TRACE control number in OrigTradeID.

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
571	TradeReportID	Y	Client-generated identifier for FIX messaging, not to exceed 20 characters.
572	TradeReportRefID		TradeReportID of original trade.
1041	FirmTradeID		Client Trade Identifier may be used to Correct a trade in lieu of TRACE Control Number (TradeID). If a new client identifier is desired for the corrected trade, then the TradeID of the original trade MUST be submitted.
1042	SecondaryFirmTradeID		*FINRA Extension to FIX 4.4:* The Contra Client Identifier assigned to the original trade by the contra side. Only used for Locked-in Trade Reports.
22011	ControlDate	F	Control Date assigned to the original trade.
1003	TradeID		TRACE Control Number of the original trade. Used in lieu of FirmTradeID.
487	TradeReportTransType	F	Valid values: 2 = Replace
856	TradeReportType	F	Valid values: 5 = Correction
570	PreviouslyReported	Y	Indicates if the trade capture report was previously reported to the counterparty Valid values: N = No
1015	AsOfIndicator	F	Valid values: 0 = false – trade is not an as-of trade. 1 = true – trade is an As-Of trade. Note: corrections submitted on T+1 must be submitted with AsOfIndicator set to '1' on all corrections, regardless if the original trade was submitted as a non AsOf trade.
48	Instrument/SecurityID	Y	Correction must contain either CUSIP or Symbol to identify the security. If CUSIP is given, set SecurityIDSource to 1. If Symbol is given, set it to 8. **PLEASE NOTE: TRACE will not support the modification of CUSIP/Symbol. In order to change the CUSIP or Symbol on a trade report, the original trade MUST be canceled and a new trade report with the intended SecurityID must be submitted.**
22	Instrument/SecurityIDSource	F	Type of identifier given in SecurityID. Valid values: 1 = CUSIP 8 = Exchange Symbol
32	LastQty	Y	Original value or amended value.
31	LastPx	Y	Original value or amended value.
423	PriceType	F	Original value or amended value.
9854	OverrideFlag		Original value or amended value.

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				Tag	Field Name	Req	Description
	75	TradeDate				Y	Original value or amended value.
	60	TransactTime				Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
	63	SettlType					Original value or amended value.
	64	SettlDate				F	Original value or amended value.
	552	TrdCapRptSideGrp/NoSides				Y	Always set value to 2. One side for the Reporting party and one side for the Contra party.
→	54	Side				Y	Side of trade. Valid values: 1 = Buy 2 = Sell
→	37	OrderID				Y	Required in FIX, but ignored
→	453	Parties/NoPartyIDs				F	Number of parties on the reporting/contra side of the trade
→	→	448	PartyID			F	Party Identifier(s).
→	→	447	PartyIDSource			F	Valid values : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→	452	PartyRole			F	Valid values: 1 = Executing Firm 14 = Giveup Firm 17 = Contra Firm 83 = Clearing Firm
→	→	802	NoPartySubIDs				PartySubID is only allowed for PartyRole = 1 or 17. Only 1 is allowed (branch office of executing/contra firm)
→	→	→	523	PartySubID			Sub-identifier. Branch office of executing/contra firm (Branch Sequence/Contra Branch Sequence) Contra PartySubID may only be entered on Locked-In trades.
→	→	→	803	PartySubIDType			Type of PartySubID (523) value Valid values: 24 = Department
→	528	OrderCapacity				F	Original value or amended value.Required on the reporting side. Contra side is required on all Locked-In trades.
→	12	Commission					Original value or amended value.
→	13	CommType					Buyer's/Seller's Commission type. Valid values: 3 = Absolute
→	58	Text					User Memo Only on the Reporting Party side. Will not be displayed to Contra party.
	22006	SpecialPriceIndicator					Original value or amended value.
	5149	Memo					Original value or amended value.
	22013	LockedInIndicator					Original value or amended value.
	22005	SpecialProcessingFlag					Original value or amended value.
	22004	TradeModifier4					Original value or amended value.
	22007	ExecutionTime				F	Original value or amended value. May only be amended to an earlier time than what was originally submitted.
	22009	PreparationTime					Time of trade correction submission (in **UTC/GMT**).

				Format: HH:MM:SS
22034	NoRemunerationIndicator			Original value or amended value.
22036	ATSExecutionMPID			Original value or amended value.
20453	OriginalNoPartyIDs			Number of original Party IDs. The OriginalParties group is required when ClientTradeID is used to identify the original transaction. Will be set to 1 in this case.
→	20448	OriginalPartyID		Original Reporting Party MPID.
→	20447	OriginalPartyIDSource		Valid values : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	20452	OriginalPartyRole		Valid values: 1 = Executing Firm
	Standard Trailer	Y		

5.2 Outbound Trade Report Acknowledgements

All inbound messages accepted by the system will produce an acknowledgement confirming the details submitted to FINRA. Reporting party and contra party will receive the proper acknowledgement. These acknowledgments are identified by the first two characters "TSxx" in Tag 1011. Rejected inbound messages will generate MsgType 'AR' to the submitter.

5.2.1 Trade Capture Report Ack – Reject (out)

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AR
571	TradeReportID	Y	Identifier assigned by marketplace NOTE: NOT the identifier set by reporting party. ~~The client-generated identifier~~
572	TradeReportRefID	Y	TradeReportID from inbound TCR~~-~~.
487	TradeReportTransType	F	Valid values: 0 = New 1 = Cancel 2 = Replace 4 = Reverse
856	TradeReportType	F	Type of Trade Report. Shows the type of the incoming trade report. Valid values: 0 = Submit 5 = Trade Correction 6 = Trade Report Cancel
150	ExecType	Y	This field signals whether the TCR was accepted or rejected. Valid values: 8 = Rejected
939	TradeRptStatus	F	Valid values: 1 = Rejected
48	Instrument/SecurityID	Y	Main Security Identifier (CUSIP) or Exchange Symbol.
22	Instrument/SecurityIDSource	F	Type of identifier given in SecurityID. Valid values: 1 = CUSIP 8 = Exchange Symbol
751	TradeReportRejectReason	Y	Reason Trade Capture Report was rejected. Same values TRACE uses can be employed here, along with any new Reason codes specific to Treasury Securities. *Please note this list is not complete and will be subject to updates*
58	Text	Y	Contains the actual error message describing the TradeReportRejectReason. Example: If TradeReportRejectReason = 4028, Text will contain: "!REJ – INVALID SYMBOL"
22015	BranchOfficeCodeSequenceNumber		This field contains the one to eight alphabetic Code and Sequence character Branch Office Code Sequence Number of the input message, if one was submitted.
	Standard Trailer	Y	

5.2.2 Trade Capture Report – Acknowledgement/TSEN (out)

Unless otherwise specified, the fields returned on the acknowledgement will echo back the values submitted on the Trade Capture Report.

Tag			FIX tag name	Req'd	Comment
			Standard Header	Y	MsgType = AE
1011			MessageEventSource	F	Used to identify the type of acknowledgment. Value "TSEN" identifies a Trade Capture Report accepted by FINRA.
571			TradeReportID	Y	Identifier assigned by marketplace NOTE: NOT the identifier set by reporting party.
572			TradeReportRefID	F	TradeReportID from inbound TCR.
1041			FirmTradeID		FirmTradeID from inbound TCR.
1042			SecondaryFirmTradeID		SecondaryFirmTradeID from inbound TCR.
22011			ControlDate	F	ControlDate assigned by FINRA on accepted trade report. Format: YYYYMMDD.
1003			TradeID	F	Control Number assigned by FINRA on accepted trade report. 10 digits, starting with the value "7".
487			TradeReportTransType	F	Valid values: 0 = New
856			TradeReportType	F	Valid values: 0 = Submit
570			PreviouslyReported	Y	Will always be set to: N = No
1015			AsOfIndicator		AsOfIndicator from inbound TCR.
48			Instrument/SecurityID	Y	Main Security Identifier (CUSIP).
22			Instrument/SecurityIDSource		Valid values: 1 = CUSIP
454			Instrument/NoSecurityAltID	F	Always set to 1
455			Instrument/SecurityAltID	F	Alternative Security identifier (Symbol).
32			LastQty	Y	LastQty from inbound TCR.
456			Instrument/SecurityAltIDSource	F	Valid values: 8 = Exchange Symbol
31			LastPx	Y	LastPx from inbound TCR.
423			PriceType	F	PriceType from inbound TCR.
9854			OverrideFlag		OverrideFlag from inbound TCR.
75			TradeDate	Y	TradeDate from inbound TCR.
60			TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63			SettlType		SettlType from inbound TCR.
64			SettlDate	F	SettlDate from inbound TCR.
552			TrdCapRptSideGrp/NoSides	Y	TrdCapRptSideGrp/NoSides from inbound TCR.
→	54		Side	Y	Side from inbound TCR.
→	37		OrderID	Y	Required in FIX, set to "NONE".
→	453		Parties/NoPartyIDs	F	Parties/NoPartyIDs from inbound TCR.
→	→	448	PartyID	F	PartyID from inbound TCR.
→	→	447	PartyIDSource	F	Will always be set to: C = Generally accepted market participant identifier (e.g. FINRA mnemonic)

→	→		452	PartyRole	F	PartyRoles from inbound TCR.
→	→		802	NoPartySubIDs		NoPartySubIDs from inbound TCR.
→	→	→	523	PartySubID		PartySubID from inbound TCR.
→	→	→	803	PartySubIDType		PartySubIDType from inbound TCR.
→		528	OrderCapacity		F	OrderCapacity from inbound TCR.
→		12	Commission			Commission from inbound TCR.
→		13	CommType			CommType from inbound TCR.
→		58	Text			Text from inbound TCR. Will not be displayed to Contra party on SPAL.
22006	SpecialPriceIndicator					SpecialProcessingFlag from inbound TCR.
5149	Memo					Memo from inbound TCR.
22013	LockedInIndicator					LockedInIndicator from inbound TCR.
22005	SpecialProcessingFlag					SpecialProcessingFlag from inbound TCR.
22003	TradeModifier3					*FINRA Extension to FIX 4.4.* Extended hours/Late sale condition modifier generated by TRACE and returned on the outbound acknowledgement of the trade report. Valid values: T = Trades reported after market hours U = Trades reported after market hours and reported late Z = Trades reported during market hours and reported late
22004	TradeModifier4					TradeModifier4 from inbound TCR.
22007	ExecutionTime				F	ExecutionTime from inbound TCR.
22009	PreparationTime					PreparationTime from inbound TCR.
22034	NoRemunerationIndicator					NoRemunerationIndicator from inbound TCR.
22036	ATSExecutionMPID					ATSExecutionMPID from inbound TCR.
797	CopyMsgIndicator					Indicates whether or not this message is a drop copy of another message. Valid values: Y = Yes N = No (default value)
	Standard Trailer				Y	

5.2.3 Trade Capture Report – Allege/TSAL (out)

Please note that the TSAL layout below is representative of an allege based on the submitting party using FIX as their method of entry. Some tags that are FIX-centric may not be present if the submitting party used CTCI or TRAQS Web to enter their trade.

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
1011	MessageEventSource	F	Used to identify the type of acknowledgment. Value "TSAL" identifies a Trade Capture Report accepted by FINRA.
571	TradeReportID	Y	Identifier assigned by marketplace NOTE: NOT the identifier set by reporting party.
1042	SecondaryFirmTradeID		SecondaryFirmTradeID from inbound TCR.
22011	ControlDate	F	ControlDate assigned by FINRA on accepted trade report. Format: YYYYMMDD.
1003	TradeID	F	Control Number assigned by FINRA on accepted trade report. 10 digits, starting with the value "7".
487	TradeReportTransType	F	Valid values: 0 = New
856	TradeReportType	F	Valid values: 1 = Allege
570	PreviouslyReported	Y	Will always be set to: N = No
1015	AsOfIndicator		AsOfIndicator from inbound TCR.
48	Instrument/SecurityID	Y	Main Security Identifier (CUSIP).
22	Instrument/SecurityIDSource		Valid values: 1 = CUSIP
454	Instrument/NoSecurityAltID	F	Always set to 1
455	Instrument/SecurityAltID	F	Alternative Security identifier (Symbol).
456	Instrument/SecurityAltIDSource	F	Valid values: 8 = Exchange Symbol
32	LastQty	Y	LastQty from inbound TCR.
31	LastPx	Y	LastPx from inbound TCR.
423	PriceType	F	PriceType from inbound TCR.
9854	OverrideFlag		OverrideFlag from inbound TCR.
75	TradeDate	Y	TradeDate from inbound TCR.
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63	SettlType		SettlType from inbound TCR.
64	SettlDate	F	SettlDate from inbound TCR..
552	TrdCapRptSideGrp/NoSides	Y	TrdCapRptSideGrp/NoSides from inbound TCR.
→ 54	Side	Y	Side from inbound TCR.
→ 37	OrderID	Y	Required in FIX, set to "NONE".
→ 453	Parties/NoPartyIDs	F	Parties/NoPartyIDs from inbound TCR.
→ → 448	PartyID	F	PartyID from inbound TCR.
→ → 447	PartyIDSource	F	Will always be set to: C = Generally accepted market participant identifier (e.g. FINRA mnemonic)

→	→		452	PartyRole	F	PartyRoles from inbound TCR.
→	→		802	NoPartySubIDs		NoPartySubIDs from inbound TCR.
→	→	→	523	PartySubID		PartySubID from inbound TCR.
→	→	→	803	PartySubIDType		PartySubIDType from inbound TCR.
→	528			OrderCapacity	F	OrderCapacity from inbound TCR.
→	12			Commission		Commission from inbound TCR.
→	13			CommType		CommType from inbound TCR.
→	58			Text		Text from inbound TCR. Will not be displayed to Contra party on SPAL.
22006				SpecialPriceIndicator		SpecialProcessingFlag from inbound TCR.
5149				Memo		Memo from inbound TCR.
22013				LockedInIndicator		LockedInIndicator from inbound TCR.
22005				SpecialProcessingFlag		SpecialProcessingFlag from inbound TCR.
22003				TradeModifier3		*FINRA Extension to FIX 4.4.* Extended hours/Late sale condition modifier generated by TRACE and returned on the outbound acknowledgement of the trade report. Valid values: T = Trades reported after market hours U = Trades reported after market hours and reported late Z = Trades reported during market hours and reported late
22004				TradeModifier4		TradeModifier4 from inbound TCR.
22007				ExecutionTime	F	ExecutionTime from inbound TCR.
22009				PreparationTime		PreparationTime from inbound TCR.
22034				NoRemunerationIndicator		NoRemunerationIndicator from inbound TCR.
22036				ATSExecutionMPID		ATSExecutionMPID from inbound TCR.
797				CopyMsgIndicator		Indicates whether or not this message is a drop copy of another message. Valid values: Y = Yes N = No (default value)
				Standard Trailer	Y	

5.2.4 Trade Capture Report – Confirmed Cancel/TSCX (out)

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
1011	MessageEventSource	F	Used to identify the type of acknowledgment. Value "TSCX" identifies a Trade Cancel accepted by FINRA.
571	TradeReportID	Y	Identifier assigned by FINRA (not Control Number).
572	TradeReportRefID	F	To the reporting party this field is set to the reporter's previous TradeReportID. To the contra party this field is set to the TradeReportID from the previous allege transaction (TSAL).
1041	FirmTradeID		FirmTradeID from inbound Trade Cancel.
1003	TradeID	F	TradeID from inbound Trade Cancel.
22011	ControlDate	F	ControlDate from inbound Trade Cancel.
487	TradeReportTransType	F	Valid values: 1 = Cancel
856	TradeReportType	F	Valid values: 6 = Cancel
570	PreviouslyReported	Y	Will always be set to: N = No
32	LastQty	Y	LastQty from inbound Trade Cancel. nnnnnnnnnnn.nn **Please note: on a Cancel of a trade report submitted on a prior day (T-1), the value "0" will always be returned.**
31	LastPx	Y	LastPx from inbound Trade Cancel. **Please note: on a Cancel of a trade report submitted on a prior day (T-1), the value "0" will always be returned.**
75	TradeDate	Y	TradeDate from inbound Trade Cancel. Format: YYYYMMDD **Please note: on a Cancel of a trade report submitted on a prior day (T-1), the current date will always be returned.**
60	TransactTime	Y	Format: YYYYMMDD-HH:MM:SS (in UTC/GMT).
552	TrdCapRptSideGrp/NoSides	Y	Will always be set to "1" on all TSCX messages.
→ 54	Side	Y	Reporting party side of trade. Valid values: 1 = Buy 2 = Sell **Please note: on a Cancel of a trade report submitted on a prior day (T-1), the value "1" will always be returned regardless of the value submitted in Tag 54 on the inbound Trade Cancel request.**
→ 37	OrderID	Y	Will always be set to "NONE".
797	CopyMsgIndicator		Indicates whether or not this message is a drop copy of another message. Valid values:

			Y = Yes
			N = No (default value)
Standard Trailer		Y	

5.2.5 Trade Capture Report – Confirmed Reversal /TSHX (out)

Unless otherwise specified, the fields returned on the acknowledgement will echo back the values submitted on the Trade Capture Report.

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
1011	MessageEventSource	F	Used to identify the type of acknowledgment. Value "TSHX" identifies a Reversal accepted by FINRA.
571	TradeReportID	Y	Identifier assigned by FINRA (not Control Number).
572	TradeReportRefID	F	TradeReportID from inbound Trade Reversal.
1041	FirmTradeID		FirmTradeID from inbound Trade Reversal.
1042	SecondaryFirmTradeID		SecondaryFirmTradeID from inbound Trade Reversal.
22012	OrigControlDate	F	Control Date of the original trade.
1126	OrigTradeID	F	TRACE Control Number of the original trade.
22011	ControlDate	F	ControlDate generated by FINRA on the accepted Trade Reversal.
1003	TradeID	F	TradeId generated by FINRA on the accepted Trade Reversal.
487	TradeReportTransType	F	Valid values: 4 = Reverse
856	TradeReportType	F	Valid values: 0 = Submit
570	PreviouslyReported	Y	Will always be set to: N = No
1015	AsOfIndicator	F	Always set to 1 on Reversals. 1 = true
48	Instrument/SecurityID	Y	Main Security Identifier (CUSIP).
22	Instrument/SecurityIDSource	F	Type of identifier given in SecurityID. Valid values: 1 = CUSIP
454	Instrument/NoSecurityAltID	F	Always set to 1
455	Instrument/SecurityAltID	F	Alternative Security identifier (Symbol).
456	Instrument/SecurityAltIDSource	F	Valid values: 8 = Exchange Symbol
32	LastQty	Y	LastQty from inbound Trade Reversal.
31	LastPx	Y	LastPx from inbound Trade Reversal.
423	PriceType	F	PriceType from inbound Trade Reversal.
9854	OverrideFlag		OverrideFlag from inbound Trade Reversal.
75	TradeDate	Y	TradeDate from inbound Trade Reversal.
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63	SettlType		SettlType from inbound Trade Reversal.
64	SettlDate	F	SettlDate from inbound Trade Reversal.
552	TrdCapRptSideGrp/NoSides	Y	TrdCapRptSideGrp/NoSides from inbound Trade Reversal.
→ 54	Side	Y	Side from inbound Trade Reversal
→ 37	OrderID	Y	Required in FIX, set to NONE.

→			453	Parties/NoPartyIDs	F	Parties/NoPartyIDs from inbound Trade Reversal
→	→		448	PartyID	F	PartyID from inbound Trade Reversal.
→	→		447	PartyIDSource	F	Will always be set to: C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→		452	PartyRole	F	PartyRoles from inbound Trade Reversal.
→	→		802	NoPartySubIDs		NoPartySubIDs from inbound Trade Reversal.
→	→	→	523	PartySubID		PartySubID from inbound Trade Reversal.
→	→	→	803	PartySubIDType		PartySubIDType from inbound Trade Reversal
→		528	OrderCapacity		F	OrderCapacity from inbound Trade Reversal
→		12	Commission			Commission from inbound Trade Reversal
→		13	CommType			CommType from inbound Trade Reversal
→		58	Text			Text from inbound Trade Reversal. Will not be provided to contra party.
22006	SpecialPriceIndicator					SpecialPriceIndicator from inbound Trade Reversal
5149	Memo					Memo from inbound Trade Reversal.
22013	LockedInIndicator					LockedInIndicator from inbound Trade Reversal.
22005	SpecialProcessingFlag					SpecialProcessingFlag from inbound Trade Reversal
22003	TradeModifier3					*FINRA Extension to FIX 4.4.* Extended hours/Late sale condition modifier generated by TRACE and returned on the outbound acknowledgement of the original trade report. Valid values: T = Trades reported after market hours U = Trades reported after market hours and reported late Z = Trades reported during market hours and reported late
22004	TradeModifier4					TradeModifier4 from inbound Trade Reversal
22007	ExecutionTime				F	ExecutionTime from inbound Trade Reversal
22009	PreparationTime					PreparationTime from inbound Trade Reversal
22034	NoRemunerationIndicator					NoRemunerationIndicator from inbound Trade Reversal.
22036	ATSExecutionMPID					ATSExecutionMPID from inbound Trade Reversal.
797	CopyMsgIndicator					Indicates whether or not this message is a drop copy of another message. Valid values: Y = Yes N = No (default value)
	Standard Trailer				Y	

5.2.6 Trade Capture Report – Confirmed Correction/TSCR (out)

Unless otherwise specified, the fields returned on the acknowledgement will echo back the values submitted on the Trade Capture Report.

Tag	FIX tag name	Req'd	Comment
	Standard Header	Y	MsgType = AE
1011	MessageEventSource	F	Used to identify the type of acknowledgment. Value "TSCR" identifies a Trade Correction accepted by FINRA.
571	TradeReportID	Y	Identifier assigned by FINRA (not Control Number).
572	TradeReportRefID	F	To the reporting party this field is set to the reporter's previous TradeReportID. To the contra party this field is set to the TradeReportID from the previous allege transaction (TSAL).
1041	FirmTradeID		FirmTradeID from inbound Trade Correction.
1042	SecondaryFirmTradeID		SecondaryFirmTradeID from inbound Trade Correction.
22011	ControlDate	F	New ControlDate assigned to the accepted Trade Correction.
1003	TradeID	F	New TradeID assigned to the accepted Trade Correction.
22012	OrigControlDate	F	ControlDate (tag 22011) from inbound Trade Correction.
1126	OrigTradeID	F	TradeId (tag 1003) from inbound Trade Correction.
487	TradeReportTransType	F	Valid values: 2 = Replace
856	TradeReportType	F	Valid values: 5 = Correction
570	PreviouslyReported	Y	Will always be set to: N = No
1015	AsOfIndicator	F	AsOfIndicator from inbound Trade Correction.
48	Instrument/SecurityID	Y	Main Security Identifier (CUSIP).
22	Instrument/SecurityIDSource	F	Type of identifier given in SecurityID. Valid values: 1 = CUSIP
454	Instrument/NoSecurityAltID	F	Always set to 1
455	Instrument/SecurityAltID	F	Alternative Security identifier (Symbol).
456	Instrument/SecurityAltIDSource	F	Valid values: 8 = Exchange Symbol
32	LastQty	Y	LastQty from inbound Trade Correction.
31	LastPx	Y	LastPx from inbound Trade Correction.
423	PriceType	F	PriceType from inbound Trade Correction.
9854	OverrideFlag		OverrideFlag from inbound Trade Correction.
75	TradeDate	Y	TradeDate from inbound Trade Correction.
60	TransactTime	Y	Time the transaction represented by this Trade Capture Report occurred (in **UTC/GMT**). Format: YYYYMMDD-HH:MM:SS
63	SettlType		SettlType from inbound Trade Correction.
64	SettlDate	F	SettlDate from inbound Trade Correction.
552	TrdCapRptSideGrp/NoSides	Y	TrdCapRptSideGrp/NoSides from inbound Trade Correction.
→ 54	Side	Y	Side from inbound Trade Correction.
→ 37	OrderID	Y	Required in FIX, set to NONE.

				Tag/Field	Req	Description
→			453	Parties/NoPartyIDs	F	Parties/NoPartyIDs from inbound Trade Correction.
→	→		448	PartyID	F	PartyID from inbound Trade Correction.
→	→		447	PartyIDSource	F	Will always be set to : C = Generally accepted market participant identifier (e.g. FINRA mnemonic)
→	→		452	PartyRole	F	PartyRoles from inbound Trade Correction.
→	→		802	NoPartySubIDs		NoPartySubIDs from inbound Trade Correction.
→	→	→	523	PartySubID		PartySubID from inbound Trade Correction.
→	→	→	803	PartySubIDType		PartySubIDType from inbound Trade Correction.
→			528	OrderCapacity	F	OrderCapacity from inbound Trade Correction.
→			12	Commission		Commission from inbound Trade Correction.
→			13	CommType		CommType from inbound Trade Correction.
→			58	Text		Text from inbound Trade Correction. Will not be provided to contra party.
			22006	SpecialPriceIndicator		SpecialPriceIndicator from inbound Trade Correction.
			5149	Memo		Memo from inbound Trade Correction.
			22013	LockedInIndicator		LockedInIndicator from inbound Trade Correction.
			22005	SpecialProcessingFlag		SpecialProcessingFlag from inbound Trade Correction.
			22003	TradeModifier3		*FINRA Extension to FIX 4.4.* Extended hours/Late sale condition modifier generated by TRACE and returned on the outbound acknowledgement of the original trade report. Valid values: T = Trades reported after market hours U = Trades reported after market hours and reported late Z = Trades reported during market hours and reported late
			22004	TradeModifier4		TradeModifier4 from inbound Trade Correction.
			22007	ExecutionTime	F	ExecutionTime from inbound Trade Correction.
			22009	PreparationTime		PreparationTime from inbound Trade Correction.
			22034	NoRemunerationIndicator		NoRemunerationIndicator from inbound Trade Correction.
			22036	ATSExecutionMPID		ATSExecutionMPID from inbound Trade Correction.
			797	CopyMsgIndicator		Indicates whether or not this message is a drop copy of another message. Valid values: Y = Yes N = No (default value)
				Standard Trailer	Y	

6 Custom values and user defined fields

This chapter details how this solution deviates from standard FIX 4.4. While great care has been taken to conform to the standard, a number of deviations are unavoidable to support all mechanisms provided by the host. Wherever later versions of FIX (up to version 5.0 SP2) provide the missing functionality, we have chosen to use that.
The deviations come in two forms, added fields and added values to existing fields.

6.1 Fields added

A number of fields had to be added to standard FIX 4.4 to cover all the requirements in this solution. Wherever possible, fields from later versions of FIX (5.0 SP2) has been used. Custom fields have been added in two ranges:

- In the 22XXX-range custom fields with no representation in standard FIX has been added.
- The 20001-21XXX range is primarily used for the historical transactions (trades submitted prior to the T-1 period), where certain fields need to appear twice; once with the original values, and once with the new values. Since the same FIX tag can't appear twice in the same message outside a repeating group, copies of the original FIX tags had to be added. They have the same data type as the "real" FIX tags, the names are prefixed with "Original", and the tag number prefixed with 20.

The following fields have been added to FIX 4.4:

Tag	FIX tag name	FIX 5.0	Comment
1003	TradeID	Yes	
1015	AsOfIndicator	Yes	
1042	SecondaryFirmTradeID	Yes	
5149	Memo	No	
9854	OverrideFlag	No	
1126	OrigTradeID	Yes	
22001	TradeModifier1	No	
22002	TradeModifier2	No	
22003	TradeModifier3	No	
22004	TradeModifier4	No	
22005	SpecialProcessingFlag	No	
22006	SpecialPriceIndicator	No	
22007	ExecutionTime	No	
22009	PreparationTime	No	
22011	ControlDate	No	
22012	OrigControlDate	No	
22013	LockedInIndicator	No	
22015	BranchOfficeCodeSequenceNumber	No	
22016	TradingMarketIndicator	No	
22034	NoRemunerationIndicator	No	
22036	ATSExecutionMPID	No	
20453	OriginalNoPartyIDs	No	
20448	OriginalPartyID	No	
20447	OriginalPartyIDSource	No	
20452	OriginalPartyRole	No	

6.2 Enumerations added

Enum	Enum description	Tag	Comment
83	Clearing Firm	452	PartyRole
4001-4071	Different reject reasons	751	TradeReportRejectReason
97	Negative Yield		New values added to describe price types applicable
98	Decimal Unit Price	423	to treasury trade reporting.

6.3 Reject Reason Table

This table contains the Reject Reason Code (Tag 751) and associated Reject Reason (Tag 58) returned on rejected entries. This list will be subject to updates as necessary.

Tag 751	Tag 58
004	SECURITY NOT FOUND
005	INVALID CONTROL DATE
006	INVALID CONTROL ID
007	INVALID FORMAT
008	UNKNOWN FUNCTION
010	INVALID TYPE
011	INVALID TRFMC
017	INVALID RPID
018	INVALID DATE
019	INVALID PRICE
020	INVALID PRICE OVERRIDE
021	ENTRY SUSPENDED
022	INVALID STATUS
023	INVALID SIDE
024	NOT WITHIN ALLOWABLE TIME
025	PRICE OUT OF RANGE
026	PRICE OUT OF OVERRIDE RANGE
027	TERMINAL NOT AUTHORIZED
028	INVALID MMID
029	INVALID TIME
030	INVALID TYPE
031	RPID REQUIRED
032	INVALID PREP TIME
036	INVALID PRICE TYPE
037	INVALID REVERSAL DATE
039	INVALID REVERSAL ID
040	DUPLICATE CONTROL DATE/ID
041	CLIENT TRADE ID MISMATCH
042	INVALID FUNCTION CODE
043	INVALID ORIGINAL CONTROL DATE

044	INVALID EXECUTION DATE
045	ONLY SAME-DAY CORRECTION PERMITTED
046	ONLY SAME-DAY CANCEL PERMITTED
047	INVALID PERCENT
048	PRICE REQUIRED
051	INVALID BUYER COMMISSION
052	INVALID DISSEMINATION DELAY TIME
053	INVALID START TIME
054	INVALID STOP TIME
055	INVALID SLD TIME
056	INVALID PRICE FLAG
057	INVALID MARKET OPEN TIME
058	INVALID MARKET CLOSE TIME
060	INVALID CUSIP NUMBER
061	INVALID EMC START TIME
062	INVALID SYMBOL
063	INVALID CUSIP
064	INVALID SECURITY DESCRIPTION
065	INVALID WHEN ISSUE IND.
066	INVALID EXCHANGE CODE
067	INVALID CLEARING NUMBER
068	SECURITY NOT FOUND
069	INVALID ACTION CODE
070	NO RECORDS FOUND
071	RPID MISMATCH
072	TRADE NOT FOUND
073	TRADE NOT MATCH ELIGIBLE
074	INVALID NO REMUNERATION
075	RPGU MISMATCH
077	INVALID MATCH CONTROL DATE
078	INVALID VOLUME ENTERED
079	CONTRA TRADE NOT FOUND
080	INVALID MATCH CONTROL ID
081	INVALID AS-OF
082	RPID NOT AUTHORIZED
083	CPID NOT AUTHORIZED
084	CANNOT CHANGE CUSIP
085	INVALID RPID GIVE-UP
086	INVALID CP GIVE-UP
087	INVALID ORIGINAL CONTROL NUMBER
088	RPID GIVE-UP NOT AUTHORIZED
089	CPID GIVE-UP NOT AUTHORIZED
090	MUST ENTER SECURITY SYMBOL OR CUSIP

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092	INVALID SECURITY
093	INVALID CONTRA SIDE
094	INVALID ACCRUED INTEREST
095	INVALID SELLER COMMISSION
097	INVALID P/A
098	CPID REQUIRED
099	INVALID CLEARING FLAG
100	INVALID REPORT FLAG
101	INVALID SPECIAL TRADE INDICATOR
102	INVALID SPECIAL TRADE INDICATOR/SPECIAL MEMO
103	SECURITY NOT ADF AUTHORIZED
104	NO CONTROL NUMBER
105	TRADE ALREADY CANCELED
106	INVALID CONTRA CLIENT REFNUM
107	MM DID NOT ENTER TRADE
108	INVALID BRANCH SEQUENCE NUMBER
109	INVALID CONTRA BRANCH SEQUENCE NUMBER
110	INVALID AS-OF DATE
111	INVALID REVERSAL FLAG
112	NOT AN OPEN TRADE
113	INVALID CPID
114	CORRECTION MAY NOT CHANGE BOND
115	SYMBOL ALREADY EXISTS
116	INVALID PRIOR DAY CLEARING FLAG
117	CUSIP HAS BEEN CHANGED
118	INVALID TRADE DATE FOR CHANGED CUSIP
119	CONTROL NUMBER REQUIRED IN THE MEMO FIELD
120	INVALID ATS EXECUTION MPID OR NOT AUTHORIZED
121	INVALID NEW ISSUE HOLD PERIOD
122	INVALID DISSEMINATION HOLD PERIOD
123	DELAY DISSEMINATION PENDING FOR CUSIP
124	INVALID AGU
125	CORRECTION MAY NOT CHANGE REVERSAL FLAG
126	INVALID RP/CP USA
127	INVALID CP/CPGU USA
128	INVALID RP/RPGU USA
129	CUSTOMERS/AFFILIATES NOT VALID IN ATS EXECUTION
131	INVALID PUBLISH INDICATOR FOR ODD LOT
132	INVALID TRADING MARKET INDICATOR
133	INVALID TRADE SUB TYPE
136	INVALID CLEARING RELATIONSHIP
138	EXECUTION TIME GREATER THAN TRADE REPORT TIME
139	NOT TRADE SUBMITTER

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142	BATCH UPLOAD NOT ALLOWED
143	CORRECTION MAY NOT CHANGE AS-OF FLAG
144	CORRECTION MAY NOT CHANGE CONTRA MPID
145	CORRECTION MAY NOT CHANGE CONTRA GIVEUP
146	CORRECTION MAY NOT CHANGE CONTRA CLEARING NUMBER
147	INVALID MATCH STATUS
149	WHEN ISSUED TRADE - POST SETTLEMENT
150	GIVE UP REQUIRED
153	INVALID REJECT CONTROL NUMBER
154	ALREADY CLOSED OR REPAIRED
155	FUNCTION NOT SUBJECT TO REPAIR
156	BUYER COMMISSION EXCEEDS PRICE
157	SELLER COMMISSION EXCEEDS PRICE
158	INVALID EXECUTION DATE / SCRTY EFFECTIVE DATE COMBINATION
159	EXPLICIT FEE AGREEMENT NOT FOUND
160	ISSUE NOT ACTIVE
161	INVALID LOCKED-IN STATUS
165	CANNOT LINK TO ORIGINAL TRADE
166	SPECIAL PROCESSING INDICATOR
167	MPID NOT ACTIVE
168	TRADING NOT ALLOWED
169	PRODUCT ENTRY SUSPENDED
170	BILL SUBPRODUCT ENTRY SUSPENDED
171	NOTE SUBPRODUCT ENTRY SUSPENDED
172	STRP SUBPRODUCT ENTRY SUSPENDED
173	TIPS SUBPRODUCT ENTRY SUSPENDED
177	TRADE ENTRY SUSPENDED EMC HALT
178	INVALID EXECUTION TIME
179	MPID NOT AUTHORIZED
180	QUANTITY REQUIRED
181	INVALID TRADE MODIFIER 1
182	INVALID TRADE MODIFIER 2
183	INVALID TRADE MODIFIER 3
184	INVALID TRADE MODIFIER 4
185	CONTRA P/A REQUIRED
186	INVALID SPECIAL PRICE INDICATOR/SPECIAL MEMO
187	INVALID SETTLEMENT DATE
188	INVALID PREPARATION DATE
189	INVALID CONTRA CLIENT TRADE IDENTIFIER
190	INVALID SPECIAL PROCESSING FLAG
191	INVALID LOCKED-IN INDICATOR
192	FIX PROTOCOL ENTRY SUSPENDED
193	CTCI PROTOCOL ENTRY SUSPENDED

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194	WEB PROTOCOL ENTRY SUSPENDED
196	INVALID RPID/CPID COMBINATION
197	ENTERING MPID IS HALTED
198	RPID IS HALTED
199	REPORTING PARTY GIVEUP IS HALTED
200	ISSUE NOT ACTIVE OR INACTIVE
201	EXECUTING PARTY NOT AUTHORIZED
202	INVALID TRADE OBLIGATION FOR AFFIRM
203	INVALID LOCKED-IN STATUS FOR SPECIFIED TRADES
204	INVALID LOCKED-IN INDICATOR FOR CROSS TRADE
205	SECURITY HALTED
206	EXECUTION TIME OUTSIDE MARKET HOURS
207	TRADE WITH THIS CPID CANNOT BE SUBMITTED FOR MATCHING
208	TRADE WITH THIS CPGU CANNOT BE SUBMITTED FOR MATCHING
209	CORRECTION NOT ALLOWED CANCEL AND NEW TRADE REQUIRED
210	CONTRA MEMO NOT ALLOWED
900	TRADE REPORTED LATE
901	TRADE REPORTED AFTER MARKET HOURS
902	TRADE REPORTED LATE AFTER MARKET HOURS
997	INVALID CONTRA CLIENT REFERENCE NUMBER
998	INVALID CLIENT REFERENCE NUMBER
999	CAN NOT BE PROCESSED AS SUBMITTED

7 Limitations

7.1 Field lengths and data types

All fields in this specification adhere to the standard FIX 4.4 field definitions. Please refer to
http://fixprotocol.org/specifications/FIX.4.4 for details.
In addition, this solution imposes the following restrictions on fields:

Tag	FIX tag name	Comment
448	PartyID	PartyID. Max valid 4 character MPIDs.
571	TradeReportID	Limited to 20 characters
572	TradeReportRefID	Limited to 20 characters
1042	SecondaryFirmTradeID	Limited to 20 characters
32	LastQty	Format: nnnnnnnnnnnn.nn
31	LastPx	Format: nnnn.nnnnnnnnnnn
12	Commission	Format: nnnnnn.nn
1003	TradeID	Max ten digits.
1126	OrigTradeID	Max ten digits.
455	SecurityAltID	Max 14 characters.
48	SecurityID	9 character CUSIP code.
5149	Memo	Max 50 characters.
523	PartySubID	Max 8 characters
22013	LockedInIndicator	FIX Data type: Boolean

22015	BranchOfficeCodeSequenceNumber	FIX Data type: String
22007	ExecutionTime	Execution time (in **UTC/GMT**). Format: HH:MM:SS.sss.mmm

8 Trade Report Examples

NOTE: The following examples are meant to highlight how important fields (in particular the party identifier fields) are intended to be populated in different scenarios. *To improve clarity, only the most important fields have been included in the listings.*

8.1 Example 1: Simple trade between 2 parties (Interdealer trade)

Broker Dealer A (ABCD) is the Reporting Party selling to Broker Dealer B (EFGH) as the Contra Party

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Reporting side	1	Reporting party (who is the executing firm).
→	→	448	Party ID	ABCD	Broker Dealer A's MPID.
→	→	452	Party Role	1	Executing firm (reporting on his own behalf).
→	528		Order Capacity	P	Principal.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Contra side	1	Only the Contra firm.
	→	448	Party ID	EFGH	Broker Dealer B's MPID.
	→	452	Party Role	17	Contra Firm.

- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is not submitted therefore only Contra Party ID/role can be submitted for the contra portion of the report.
- Order Capacity (Tag 528), Commission (Tag 12), Party Sub ID *aka* Contra Branch Sequence (Tag 523), Secondary Firm Trade ID *aka* Contra Client Trade Identifier (Tag 1042) and any other related contra Tags cannot be repeated or submitted since the trade was not submitted as a Locked-In trade (Tag 22013). If any of these Tags are repeated/submitted, the trade will be rejected.

8.2 Example 2: Simple trade between a broker-dealer and its customer (Customer trade)

Broker Dealer A (ABCD) is the Reporting Party buying from a customer (C) as the Contra Party

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Reporting side	1	Reporting party (who is the executing firm).
→	→	448	Party ID	ABCD	Broker Dealer A's MPID.
→	→	452	Party Role	1	Executing firm (reporting on his own behalf).
→	528		Order Capacity	A	Agent.
→	12		Commission	500.00	Determined to be Buyer's commission based on Tag 54 value of 1.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Contra side	1	Only the Contra firm.
→	→	448	Party ID	C	Customer MPID.
→	→	452	Party Role	17	Contra Firm.

- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is not submitted therefore only Contra Party ID/role can be submitted for the contra portion of the report.
- Order Capacity (Tag 528), Commission (Tag 12), Party Sub ID *aka* Contra Branch Sequence (Tag 523), Secondary Firm Trade ID *aka* Contra Client Trade Identifier (Tag 1042) and any other related contra Tags cannot be repeated or submitted since the trade was not submitted as a Locked-In trade (Tag 22013). If any of these Tags are repeated/submitted, the trade will be rejected.

Note: A trade between a broker-dealer and its non-member affiliate would be reported in the same manner above, however the PartyID of the contra firm would be submitted as "A".

8.3 Example 3: Simple Give-Up trade between 2 parties

Broker Dealer A (ABCD) is the Reporting Party Giving Up Broker Dealer C (MNOP) who is buying from Broker Dealer B (EFGH)

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Reporting side	2	Reporting party, and the Give-up firm.
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	1	Executing Firm.
→	→	448	Party ID	MNOP	Broker Dealer C MPID.
→	→	452	Party Role	14	Giveup Firm.
→	528		Order Capacity	A	Agent.
→	12		Commission	500.00	Determined to be Buyer's commission based on Tag 54 value of 1.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Contra side	1	Only the Contra firm.
→	→	448	Party ID	EFGH	Broker Dealer B MPID.
→	→	452	Party Role	17	Contra Firm.

- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is not submitted therefore only Contra Party ID/role can be submitted for the contra portion of the report.
- Order Capacity (Tag 528), Commission (Tag 12), , Party Sub ID *aka Contra Branch Sequence* (Tag 523), Secondary Firm Trade ID *aka Contra Client Trade Identifier* (Tag 1042) and any other related contra Tags cannot be repeated or submitted since the trade was not submitted as a Locked-In trade (Tag 22013). If any of these Tags are repeated/submitted, the trade will be rejected.

8.4 Example 4: One-Sided Locked-In Trade

Broker Dealer A (ABCD) is the Reporting Party Giving Up Broker Dealer C (MNOP), who he traded with. ABCD bought from MNOP.

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Reporting side	2	Reporting party, and the Give-up firm.
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	1	Executing Firm.
→	→	448	Party ID	MNOP	Broker Dealer C MPID.
→	→	452	Party Role	14	Giveup Firm.
→	528		Order Capacity	P	MNOP acting as Principal.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Contra side	1	Contra firm.
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	17	Contra Firm.
→	528		Order Capacity	A	ABCD acting as Agent.
→	12		Commission	500.00	Determined to be Buyer's commission based on Tag 54 value of 1.
22013			Locked-In Indicator	Y	Locked-In trade.

- TRACE rules require that all Locked-In trades must be submitted from the sell-side perspective. Since ABCD reports for MNOP, and ABCD bought from MNOP, ABCD reports the trade from MNOP's perspective (as the sell-side), therefore the Giveup role is contained within the Sell group of the message and ABCD is listed as the Contra under the Buy group.
- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is submitted therefore any Contra Party related tags can be submitted for the contra portion of the report.
- Order Capacity (Tag 528) must be repeated on Locked-In trades.
- Commission (Tag 12) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.

- Trade Report ID *aka Client Trade Identifier* (Tag 571) corresponds to the Reporting Party side and may be submitted. Secondary Firm Trade ID *aka Contra Client Trade Identifier* (Tag 1042) corresponds to the Contra Party side and may be submitted on a Locked-In trade.
- Party Sub ID *aka Branch Sequence* (Tag 523) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.
- All other Tags correspond to the reporting side of the trade.

8.5 Example 5: One-Sided Locked-In Trade

Broker Dealer A (ABCD) is the Reporting Party Giving Up Broker Dealer C (MNOP), who he traded with. ABCD sold to MNOP.

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Reporting side	1	Reporting/executing party.
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	1	Executing Firm.
→	528		Order Capacity	A	ABCD acting as Agent.
→	12		Commission	500.00	Determined to be Seller's commission based on Tag 54 value of 2.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Contra side	2	Reporting party, the Give-up firm (on the contra side).
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	17	Contra Firm.
→	→	448	Party ID	MNOP	Broker Dealer C MPID.
→	→	452	Party Role	14	Giveup Firm.
→	528		Order Capacity	P	MNOP acting as Principal.
22013			Locked-In Indicator	Y	Locked-In trade.

- TRACE rules require that all Locked-In trades must be submitted from the sell-side perspective. Since ABCD reports for MNOP, and ABCD sold to MNOP, ABCD reports the trade from ABCD's perspective (as the sell-side), therefore the Giveup role is contained within the Buy (Contra) group of the message and ABCD is listed as the Executing firm under the Sell group.
- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is submitted therefore any Contra Party related tags can be submitted for the contra portion of the report.
- Order Capacity (Tag 528) must be repeated on Locked-In trades.
- Commission (Tag 12) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.
- Trade Report ID *aka Client Trade Identifier* (Tag 571) corresponds to the Reporting Party side and may be submitted. Secondary Firm Trade ID *aka Contra Client Trade Identifier* (Tag 1042) corresponds to the Contra Party side and may be submitted on a Locked-In trade.

- Party Sub ID *aka Branch Sequence* (Tag 523) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.
- All other Tags correspond to the reporting side of the trade.

8.6 Example 6: Two-Sided Locked-In Trade

Broker Dealer A (ABCD) is the Reporting Party Giving Up both Broker Dealer C (MNOP) and Broker Dealer B (EFGH), who traded with one another. MNOP sold to EFGH. ABCD is not a part of the trade, merely entering the trade on behalf of both of its correspondents (MNOP and EFGH).

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Reporting side	2	Reporting party, and the Give up firm (on the reporting side).
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	1	Executing Firm.
→	→	448	Party ID	MNOP	Broker Dealer C MPID.
→	→	452	Party Role	14	Giveup Firm.
→	528		Order Capacity	A	MNOP acting as Agent.
→	12		Commission	500.00	Determined to be Seller's commission based on Tag 54 value of 2.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Contra side	2	Reporting party, and the Give-up firm (on the contra side).
→	→	448	Party ID	ABCD	Broker Dealer A MPID.
→	→	452	Party Role	17	Contra Firm.
→	→	448	Party ID	EFGH	Broker Dealer B MPID.
→	→	452	Party Role	14	Giveup Firm.
→	528		Order Capacity	A	EFGH acting as Agent.
→	12		Commission	500.00	Determined to be Buyer's commission based on Tag 54 value of 1.
22013			Locked-In Indicator	Y	Locked-In trade.

- TRACE rules require that all Locked-In trades must be submitted from the sell-side perspective. Since ABCD reports for both MNOP and EFGH, and MNOP sold to EFGH, ABCD reports the trade from MNOP's perspective (as the sell-side Giveup Firm), and EFGH is the contra Giveup Firm within the Buy group of the message. ABCD is listed as the Executing Firm under the reporting side and as the Contra Firm on the contra side.
- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is submitted therefore any Contra Party related tags can be submitted for the contra portion of the report.
- Order Capacity (Tag 528) must be repeated on Locked-In trades.

- Commission (Tag 12) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.
- Trade Report ID *aka Client Trade Identifier* (Tag 571) corresponds to the Reporting Party side and may be submitted. Secondary Firm Trade ID *aka Contra Client Trade Identifier* (Tag 1042) corresponds to the Contra Party side and may be submitted on a Locked-In trade.
- Party Sub ID *aka Branch Sequence* (Tag 523) may be omitted, submitted for one of the sides, or repeated under each side on Locked-In trades.
- All other Tags correspond to the reporting side of the trade.

8.7 Example 7: Trade executed between 2 broker-dealers on an Alternative Trading System (ATS) platform

Broker Dealer A (ABCD) is the Reporting Party selling to Broker Dealer B (EFGH) as the Contra Party, identifying the trade was executed on ATS ZZZZ's system.

TAG			TAG Name	Value	Comment
552			Number of Sides	2	Report contains information on both sides of the trade.
→	54		Side	2	Indicates the following repeating group represents the sell side of the trade.
→	453		Number of parties on the Reporting side	1	Reporting party/executing firm.
→	→	448	Party ID	ABCD	Broker Dealer A's MPID.
→	→	452	Party Role	1	Executing firm (reporting on his own behalf).
→	528		Order Capacity	P	Principal.
→	54		Side	1	Indicates the following repeating group represents the buy side of the trade.
→	453		Number of parties on the Contra side	1	Only the Contra firm.
	→	448	Party ID	EFGH	Broker Dealer B's MPID.
	→	452	Party Role	17	Contra Firm.
22036			ATSExecutionMPID	ZZZZ	ZZZZ is the MPID of the ATS.

- Number of sides (Tag 552) must always be submitted as "2" to allow identification of the Contra Party.
- The Locked-In Indicator (Tag 22013) is not submitted therefore only Contra Party ID/role can be submitted for the contra portion of the report.
- Order Capacity (Tag 528), Commission (Tag 12), Party Sub ID *aka* Contra Branch Sequence (Tag 523), Secondary Firm Trade ID *aka* Contra Client Trade Identifier (Tag 1042) and any other related contra Tags cannot be repeated or submitted since the trade was not submitted as a Locked-In trade (Tag 22013). If any of these Tags are repeated/submitted, the trade will be rejected.
- ZZZZ /Tag 22036 is not counted as a party under the Number of Parties (Tag 453) on either side, therefore tag 22036 if applicable should not be included in either nested group.

Revision History

Version	Revision Date	Description of change
1.0	9/1/16	Initial version.
1.1	12/27/16	Updated definition of "When Issued Transaction"
1.2	4/25/17	Updated Section 6.3 Reject Codes and Descriptions. Added Tag 456 to TSEN message. Corrected Prior Day reference using T-1.
1.3	5/9/17	Clarified Tag 571 Comment on ACK – Reject message Added Tag 456 to TSAL message as FINRA Required Updated Tag 455 to FINRA Required on TSEN, TSAL and TSHX messages