



The Chicago Stock Exchange, Inc.

Midwest Automated Execution System
FIX Protocol - MAX[®] Link Specifications Manual



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Revision History

Date	By	Description of changes
23-Aug-2001	Mjr	Modified specification to encompass changes for FIX v4.1. Added New Order – Single [Outbound] message for CHX/DOT usage
14-Jun-2002	Yot	Add <i>OrigClOrdID</i> to “ Execution Report ” and review the order state changes for “ Order Cancel Request ” and “ Cancel/Replace Request ”.
06-Jan-2003	Yot	Added references to “OnBehalfOfCompID” and “DeliverToCompID” to documentation
25-July-2003	Vsu	Added “OnBehalfOfSubID” for CHX/DOT usage.
24-May-2004	DAS	Added new values for the HandlInst (tag 21) of 4 for CHXPress Orders.
17-Aug-2004	DAS	Added a new value for the HandleInst (tag 21) of 6 for E-Book Orders.
28-Aug-2004	CAB	Added new values for Side (tag 54) of 8 and 9 for Cross and Cross Short Orders
21-Oct-04	YT	EBook.
7-Apr-2005	VSU	Added new values for Side (tag 54) of A for Cross Short Exempt Orders
27-May-2005	DAS	Modified CHXPress to accept Sell Short Exempt and Sell Short (Sell Short Exempt Stocks only) orders.
27-May-2005	KT	Added CHX supported values for Tag 47 as Appendix A
01-Jun-2005	RJG	Added OC as an eligible CHXpress Time-in-Force
06-Jun-2005	DAS	Added the list of valid values for the Time-in-Force field (tag # 59).
09-Feb-2006	YT	Added the HandlInst (#21) field to the Order Cancel and Order Status Request.



Introduction

This document is a supplement of the FIX 4.0 and FIX 4.1 Protocol Specifications, which can be accessed at www.fixprotocol.org. Conceptually, this specification is a subset of the FIX Protocol v4.0 and FIX Protocol v4.1 Specifications. It is meant to clarify portions of the FIX protocol as they relate to the CHX.

Note: CHX can support FIX v4.0 and FIX v4.1. Any fields denoted in the message tables as “**New for FIX v4.1**” are included in the message for FIX v4.1, and are excluded from the message for FIX v4.0 unless otherwise specified.

This document will state only things that are optional, different or unclear in the specification or things that need to be emphasized.

This document refers to messages received by CHX as “inbound messages” and messages sent to brokers as “outbound messages”.

Unsupported FIX Messages

The CHX does not support the following FIX message types:

- Advertisements
- Indications of Interest
- News
- Quote Request
- Quote
- Allocation
- Allocation ACK
- New Order List
- List Status
- List Execute
- List Cancel Request
- List Status Request



The FIX Session

This section describes general information, which will be needed to establish and maintain a FIX connection with the CHX.

- The CHX supports FIX version 4.0 and version 4.1.
- Must use TCP/IP protocol for FIX messaging.
- The CHX FIX engine will always behave as the server. The broker must connect to CHX FIX system at a pre-arranged IP address and port number.
- The CHX will provide the broker with two IP addresses: one for the primary host and the other for the backup host. The TCP port number will be the same for both the primary and backup host.
- In the message header of inbound messages, the *TargetCompID* field's value is always "CHX".
 - In the message header of inbound messages, the *SenderCompID* field's value will be determined at contact. The *SenderCompID* field has a maximum length of 4 characters.

Message Header

For Entities that have previously agreed upon relationships with CHX Floor Brokers, the following fields must be included on ALL messages the sending entity wishes to route to a particular floor broker.

Tag	Field Name	Req'd	Value
128	DeliverToCompID	N	A field up to four characters long that will identify which CHX broker will receive this message.
115	OnBehalfOfCompID	N	A field up to four characters long that will identify sending entity originated this message.

For CHX-DOT system, CHX sends the following fields in the message header.

Tag	Field Name	Req'd	Value
115	OnBehalfOfCompID	N	A field up to four characters long that will identify sending entity originated this message (i.e. firm identifier).
116	OnBehalfOfSubID	N	A field up to four characters long that will identify sending entity originated this message (i.e. terminal id or trader).

Logon Message

While data encryption is supported within the FIX specification, the CHX does not support this feature. The CHX only establishes connections to brokers via a dedicated circuit.

Therefore, the following clarifications on the logon message must be stated



Tag	Field Name	Req'd	Value
98	<i>EncryptMethod</i>	Y	Always 0 (None).
108	<i>HeartBtInt</i>	Y	Pre-arranged between CHX and the broker. CHX will adjust to this value (received from the firm) and put it in the confirmation Logon message (sent to the firm)
141	<i>ResetSeqNumFlag</i>	N	CHX doesn't support 24-hour connectivity so if a firm sends a logon with <i>ResetSeqNumFlag</i> =Y, it will reject the logon message. New for FIX v4.1

The fields *RawDataLength* and *RawData* are not supported

Other Session Control Messages

All other administrative messages for session control – **Heartbeat, Test Request, Resend Request, Reject, Sequence Reset and Logout** – are support as described in the FIX Protocol Specification, which can be accessed at www.fixprotocol.org.

Email

The following table describes the CHX support for inbound or outbound e-mail messages.

Tag	Field Name	Req'd	Value
94	<i>EmailType</i>	Y	CHX always sends "0" (New).
33	<i>LinesOfText</i>	Y	
58	<i>Text</i>	Y	
147	<i>Subject</i>	Y	New for FIX v4.1
164	<i>EmailThreadId</i>	Y	New for FIX v4.1
37	<i>OrderID</i>	N	CHX may populate this field.

Order Processing

New Order – Single [Inbound]

After the CHX receives a “**New Order – Single**” message from the broker, the CHX will immediately acknowledge that order with an “**Execution Report**” message with *OrdStatus* = 0 (New).

If an order is rejected, CHX will send an “**Execution Report**” with *OrdStatus* = 8 (Rejected) with *OrdRejReason* OR *Text*, but not both.

An order with *Side* = 3 (Buy Minus), 4 (Sell Plus) or 6 (Sell Short Exempt) will be processed manually.



Cross Orders can be sent using *Side* = 8 and Cross Short Orders can be sent using *Side* = 9 and Cross Short Exempt Orders can be sent using *Side* = A.

Cross, Cross Short and Cross Short Exempt Orders must have *BuyerFirm* (tag 7365) and *SellerFirm* (tag 7366) specified.

Note: Cross, Cross Short and Cross Short Exempt orders are only valid with E-Book orders.

An order with *OrdType* = 6 (With or without), 8 (Limit with or without) or 9 (On basis) will be processed manually.

An order with *ExeInst* = 1 (Not held) will be handled manually.

An order with *SettlmTyp* = 1 (Cash), 2 (Next Day), 6 (Future) or 8 (Sellers Option) will be handled manually.

If the *HandlInst* = 4 (CHXPress Order), the order must meet the following criteria or they will be rejected.

- No *ExeInst* should be specified.
- Settlement Type will always be “regular”
- Time-in-Force must be “DAY” or “GT” date (where the date must be the current day) or OC.
- Order can only be a buy, sell, Sell Short Exempt or Sell Short (Sell Short Exempt Issues only).
- Order must be a round lot.

Note: CHXPress Orders cannot be cancel/replaced. They can only be cancelled.

If the *HandlInst* = 6 (eBook), the order must meet the following criteria or it will be rejected.

- Stock needs to be an eBook issue.
- Order can only be a buy, sell, sell short, cross, cross short and cross short exempt.
- Order must be a round lot.
- Order can be a Limit or OB only.
- Time-in-Force must be “DAY” or “GT” date (where the date must be the current day).
- FOK or OC is permitted.
- No Settlement Type other than “Regular” can be specified (no Cash, Next Day, Seller Days).
- Cross or Cross with size orders are allowed.

Additionally, if a stock is an eBook issue, all orders with this stock need to have *HandlInst* = 6 (eBook) specified or they will get rejected.

Cross, cross short and cross short exempt orders are for eBook orders only. The *BuyerFirm* (#7365) and *SellerFirm* (#7366) are required for cross, cross short or cross short exempt orders.



Tag	Field Name	Req'd	Value
11	ClOrdID	Y	This field must at a minimum be unique for the current day. For multi-day, the firm must assure uniqueness of this field across days. Embedding a date with the <i>ClOrdID</i> would be one solution.
21	HandInst	Y	1 = Automated execution order, private, no Broker intervention. 2 = Automated execution order, public, Broker intervention O.K. 3 = Manual Order, best execution. 4 = CHXPress Orders. 5 = PPO Orders. 6 = E-Book Orders.
55	Symbol	Y	
54	Side	Y	1 = Buy 2 = Sell 3 = Buy minus 4 = Sell plus 5 = Sell short 6 = Sell short exempt 8 = Cross 9 = Cross short A = Cross short exempt
38	OrderQty	Y	999,999 Maximum shares allowed.
40	OrdType	Y	
63	SettlmntTyp	N	CHX accepts only: 0 = Regular 1 = Cash 2 = Next Day 6 = Future 8 = Sellers Option
64	FultSettDate	N	Required when <i>SettlmntTyp</i> = 6 (Future) or 8 (Sellers Option).
18	ExecInst	N	CHX accepts only: 1 = Not held 5 = Held E = Do not increase - DNI F = Do not reduce - DNR G = All or none - AON
65	SymbolSfx	N	
44	Price	N	
99	StopPx	N	
47	Rule80A	Y	See Appendix A for CHX supported values.
59	TimeInForce	N	0 = Day 1 = Good Till Cancel 2 = At the Opening 3 = Immediate or Cancel 4 = Fill or Kill 5 = Good Till Crossing 6 = Good Till Date
126	ExpireTime	N	Required if <i>TimeInForce</i> = GTD.
7365	BuyerFirm	N	Required if <i>Side</i> = 8 (Cross) or 9 (Cross Short) or A (Cross Short Exempt). 4 alphanumeric.
7366	SellerFirm	N	Required if <i>Side</i> = 8 (Cross) or 9 (Cross Short) or A (Cross Short Exempt) 4 alphanumeric.



New Order – Single [Outbound]

CHX has the capability to send laid off orders to outside brokers for execution at SIAC’s DOT system. If you are utilizing the CHX-DOT system, a FIX New Order – Single message would be sent with the following format:

Tag	Field Name	Req'd	Value
11	ClOrdID	Y	Will be in YYYYMMDDxxxxx, where YYYY = year, MM = month, DD = day, xxxxx = sequential incrementing number, zero filled.
21	HandlInst	Y	Always 2 (.Automated execution-Broker Intervention O.K).
55	Symbol	Y	
54	Side	Y	
38	OrderQty	Y	999,999 Maximum shares allowed.
40	OrdType	Y	
CHX may populate these optional fields:			
65	SymbolSfx	N	
44	Price	N	If not a MKT order
99	StopPx	N	If OrdType = “Stop” of OrdType = “Stop Limit”

Any Execution Report messages sent back in response to the New Order – Single message must have the ClOrdId field populated with the ClOrdId from the originating order.

Order Cancel Request

This message is used to request the cancellation of all of the remaining quantity of an existing order. In order to partially cancel (reduce) an order, use the “**Cancel/Replace Request**” message.

FIX 4.0: After the CHX receives a “**Order Cancel Request**” message from the broker, the CHX will immediately acknowledge that cancel with an “**Execution Report**” message referencing the *ClOrdId* (not *OrigClOrdId*) with *OrdStatus* = 0 (New).

FIX 4.1: After the CHX receives a “**Order Cancel Request**” message from the broker, the CHX will immediately acknowledge that cancel with an “**Execution Report**” message referencing the *ClOrdId* (not *OrigClOrdId*) with *ExecType* and *OrdStatus* = 6 (Pending Cancel/Replace).

FIX 4.0: If the requested cancel is successful, the CHX will send an “**Execution Report**” referencing the *OrigClOrdID* (not *ClOrdID*) with *OrderStatus* = 4 (Cancelled).

FIX 4.1: If the requested cancel is successful, the CHX will send an “**Execution Report**” referencing the *ClOrdID* (not *OrigClOrdID*) with *ExecType* and *OrderStatus* = 4 (Cancelled).



If the requested cancel is not successful, CHX will reply with an “**Order Cancel Reject**” referencing the *ClOrdID*. Since some cancel requests must be handled manually at the CHX, an “**Order Cancel Reject**” message is not always sent back to the broker.

Please note that cross or cross short or cross short exempt orders cannot be cancelled or cancelled/replaced electronically. The order sending firms need to contact the customer service to do so.

Tag	Field Name	Req'd	Value
41	OrigClOrdID	Y	Order ID of the order being cancelled.
11	ClOrdID	Y	Must be unique for the current day.
125	CxlType	Y	CHX accepts only: F = Full remaining quantity. This field is only used in FIX v4.0 only. Field #125, CxlType is no longer a field in this message in FIX v4.1
55	Symbol	Y	
54	Side	Y	
38	OrderQty	Y	Original <i>OrderQty</i> .
65	SymbolSfx	N	
21	HandlInst	N	If the original order’s HandlInstr is 6 (E-Book), this field must be populated with the same value. CHX accepts only: 6 = E-Book Orders.

Order Cancel Reject

If the CHX is unable to honor an “**Order Cancel Request**” or “**Order Cancel/Replace**” Request submitted by the broker, CHX will send this message back.

Since some orders must be handled manually, the CHX cannot always return an “**Order Cancel Reject**” to the broker.

Tag	Field Name	Req'd	Value
11	ClOrdID	Y	Unique order ID of Order Cancel Request or Order Cancel/Replace Request .
37	OrderID	Y	Can be ":00000" (no branch code and sequence number), indicating that CHX assigned no order ID because it was rejected.
39	OrdStatus	Y	New for FIX v4.1
41	OrigClOrdId	Y	New for FIX v4.1
CHX may populate these optional fields:			
102	CxlRejReason	N	Populated, if there is a matched code (reject reason) in the FIX spec. If not, <i>Text</i> is used instead.
58	Text	N	Used as follows: <ul style="list-style-type: none"> "Invalid Price" or "Invalid StopPx".



Cancel/Replace Request

Do not use this message to cancel the remaining quantity of an outstanding order; use the “**Order Cancel Request**” message instead.

FIX 4.0: After the CHX receives a “**Cancel/Replace Request**” message from the broker, the CHX will immediately acknowledge that cancel/replace with an “**Execution Report**” message referencing the *OrigClOrdId* (**not ClOrdId**) with *OrdStatus* = 6 (Pending Cancel/Replace).

FIX 4.1: After the CHX receives a “**Cancel/Replace Request**” message from the broker, the CHX will immediately acknowledge that cancel/replace with an “**Execution Report**” message referencing the *ClOrdId* (**not OrigClOrdId**) with *ExecType* and *OrdStatus* = 6 (Pending Cancel/Replace).

FIX 4.0: If the request is successful, the CHX will send an “**Execution Report**” referencing the *ClOrdID* (**not OrigClOrdID**) with *OrderStatus* = 0 (New) for fully open order or *OrderStatus* = 1 (Partially filled) for partially filled order. From that point on, the broker must reference the *replacement* order with the *ClOrdID*.

FIX 4.1: If the request is successful, the CHX will send an “**Execution Report**” referencing the *ClOrdID* (**not OrigClOrdID**) with *ExecType* = 5 (Replaced) and *OrderStatus* = 5 (Replaced) for fully open order or *OrderStatus* = 1 (Partially filled) for partially filled order. From that point on, the broker must reference the *replacement* order with the *ClOrdID*.

If the requested cancel is not successful, CHX will reply with an “**Order Cancel Reject**” referencing the *ClOrdID*. Since some cancel requests must be handled manually at the CHX, an “**Order Cancel Reject**” message is not always sent back to the broker.

If the *HandlInst* = 4 (CHXPress Order), the order must meet the following criteria or they will be rejected.

- No *ExeInst* should be specified.
- Settlement Type will always be “regular”
- Time-in-Force must be “DAY” or “GT” date (where the date must be the current day) or OC.
- Order can only be a buy, sell, Sell Short Exempt or Sell Short (Sell Short Exempt Issues only).
- Order must be a round lot.

Note: CHXPress Orders cannot be cancel/replaced. They can only be cancelled.

If the *HandlInst* = 6 (eBook), the order must meet the following criteria or it will be rejected.

- Stock needs to be an eBook issue.
- Order can only be a buy, sell, sell short, cross, cross short or cross short exempt.
- Order must be a round lot.
- Order can be a Limit or OB only.
- Time-in-Force must be “DAY” or “GT” date (where the date must be the current day).
- FOK or OC is permitted.
- No Settlement Type other than “Regular” can be specified (no Cash, Next Day, Seller Days).



Additionally, if a stock is an eBook issue, all orders with this stock need to have *HandlInst* = 6 (eBook) specified or they will get rejected.

Please note that cross, cross short or cross short exempt orders cannot be cancelled or cancelled/replaced electronically. The order sending firms need to contact the customer service to do so.

Tag	Field Name	Req'd	Value
41	OrigClOrdID	Y	Order ID of the order being replaced.
11	ClOrdID	Y	Unique identifier of replacement order as assigned by institution. This field must at a minimum be unique for the current day. For multi-day, the firm must assure uniqueness of this field across days. Embedding a date with the <i>ClOrdID</i> would be one solution.
21	HandlInst	Y	Must match the original order. Otherwise it will get rejected.
55	Symbol	Y	Must match the original order.
54	Side	Y	Changeable but only: Buy <-> Buy Minus Sell <-> Sell Plus
38	OrderQty	Y	Changeable but this quantity has to include any partial executions previously received on the original order(s).
40	OrdType	Y	Changeable.
63	SettlmntTyp	N	Changeable.
64	FultSettDate	N	Changeable.
18	ExecInst	N	Changeable. For supported values, see New Order - Single .
65	SymbolSfx	N	Must match the original order.
44	Price	N	Changeable.
99	StopPx	N	Changeable.
59	TimeInForce	N	Changeable.
126	ExpireTime	N	Changeable.

Order Status Request

Upon receiving an “**Order Status Request**” message, the CHX will response with an “**Execution Report**” with *ExecTransType* = 3 (Status).

Tag	Field Name	Req'd	Value
11	ClOrdID	Y	
55	Symbol	Y	
54	Side	Y	
37	OrderID	N	
65	SymbolSfx	N	
21	HandlInst	N	If the original order’s <i>HandlInstr</i> is 6 (E-Book), this field must be populated with the same value. CHX accepts only: 6 = E-Book Orders.



Trade Reporting

Execution Report

When an order gets filled or partially filled, CHX will send an “**Execution Report**” representing the trade.

Tag	Field Name	Req'd	Value
37	OrderID	Y	Unique identifier for order as assigned by CHX. Its format is: AAAA:NNNNN , where AAAA = branch code maximum 4 alphanumeric and NNNNN = a sequence number of 5 numeric right justified and zero filled. Example: FX1:00001 .
17	ExecID	Y	Unique identifier of execution message (not trade; CHX doesn't provide the trade ID.) as assigned by CHX. This field will always be “0” if <i>ExecTransType</i> = 3 (Status).
20	ExecTransType	Y	
39	OrdStatus	Y	The CHX supports the following status values: <ul style="list-style-type: none"> • 0 = New • 1 = Partially filled • 2 = Filled • 3 = Done for day • 4 = Canceled • 5 = Replaced • 7 = Stopped • 8 = Rejected • C = Expired
55	Symbol	Y	
54	Side	Y	
38	OrderQty	Y	
32	LastShares	Y	Quantity of shares bought/sold; otherwise 0.
31	LastPx	Y	Price of <i>LastShares</i> .
14	CumQty	Y	
6	AvgPx	Y	
150	ExecType	Y	New for FIX v4.1
151	LeavesQty	Y	New for FIX v4.1
CHX may populate these optional fields:			
11	ClOrdID	N	Always populated.
41	OrigClOrdID	N	Conditionally populated for PendingCancel, Replaced, Canceled <i>ExecType</i> values. <i>ClOrdID</i> of the previous order (NOT the initial order of the day) when canceling or replacing and order. New for FIX 4.1.
65	SymbolSfx	N	
40	OrdType	N	Always populated.
44	Price	N	Populated only when <i>OrdStatus</i> = 5 (Replaced).
99	StopPx	N	Populated only when <i>OrdStatus</i> = 5 (Replaced).
18	ExecInst	N	Populated only when <i>OrdStatus</i> = 5 (Replaced). For supported values, see New Order – Single .



Tag	Field Name	Req'd	Value
59	TimeInForce	N	Always populated. 0 = Day 1 = Good Till Cancel 2 = At the Opening 3 = Immediate or Cancel 4 = Fill or Kill 5 = Good Till Crossing 6 = Good Till Date
126	ExpireTime	N	Populated when <i>TimeInForce</i> = GTD.
76	ExecBroker	N	The counterpart of the trade. For example, INCT (Instinet).
19	ExecRefID	N	Populated when <i>ExecTransType</i> = 1 (Cancel) or 2 (Correct).
103	OrdRejReason	N	Populated when <i>OrdStatus</i> = 8 (Rejected) and there is a matched code (rejected reason) in the FIX specification. If there is no matched code, CHX will populate <i>Text</i> instead.
60	TransactTime	N	
58	Text	N	Used as follows: <ul style="list-style-type: none"> • In the case of <i>ExecTransType</i> = 2 (Trade correction), it shows the corrected price: "NOT price". • In the case of <i>OrdStatus</i> = 5 (Replaced) and this change was unsolicited and caused by Ex-dividend, it shows "EX-DIVID ORDER CHANGE: Ex-divd information". • In the case of <i>OrdStatus</i> = 5 (Replaced) and this change was unsolicited and not caused by Ex-dividend, it shows "ORDER CHANGE". • In the case of <i>OrdStatus</i> = 7 (Stopped), it indicates the guaranteed price: "UR STPD price". • In the case of <i>OrdStatus</i> = 8 and there is no matched <i>OrdRejReason</i>, this field will describe why CHX rejected the order.
84	CxIQty (<i>not standard</i>)	N	Unspecified in the FIX Protocol spec. If <i>OrdStatus</i> = 4 (Canceled), this field will contain the number of shares canceled.

Don't Know Trade (DK)

The broker uses the “Don’t Know Trade” when an execution is received for an unknown order.

Tag	Field Name	Req'd	Value
127	DKReason	Y	
55	Symbol	Y	
54	Side	Y	
38	OrderQty	Y	
32	LastShares	Y	
31	LastPx	Y	
37	OrderID	N	
17	ExecID	N	
65	SymbolSfx (<i>not standard</i>)	N	
58	Text	N	



Customer Service Actions

Cancel / Cancel Replace Orders

If an order is canceled by the CHX (unsolicited cancel), the CHX will notify the broker by sending an “**Execution Report**” referencing *ClOrdID* of the canceled order with *OrdStatus* = 4 (Canceled).

If an order is cancel replaced by the CHX (unsolicited), the CHX will notify the broker by an “**Execution Report**” referencing *ClOrdID* of the canceled/replaced order with *OrdStatus* = 5 (Replaced) and *Text* describing the cancellation reason.

Busted and Corrected Trades

If a trade is busted, the CHX will send an “**Execution Report**” referencing the original order in *ExeRefID* with *ExecTransType* = 1 (Trade Cancel).

If a trade is corrected, the CHX will send an “**Execution Report**” referencing the original order in *ExeRefID* with *ExecTransType* = 2 (Trade Correction).

Miscellaneous Actions

If an order is stopped (or guaranteed - UR STPD), the CHX will inform the firm with an “**Execution Report**” referencing *ClOrdID* of the stopped order with *OrdStatus* = 7 (Stopped) and *Text* showing the guaranteed price.

The CHX may send an “**Execution Report**” message with *OrdStatus* = 3 (Done for day), indicating there will be no more trades today for the order.

The CHX may send an “**Execution Report**” message with *OrdStatus* = C (Expired) after the market is closed, indicating the order has been expired.



APPENDIX A

CHX will convert Tag 47 (Rule 80A) Account Indicator to the following MAX/OTC values:

Account Indicator	MAX/OTC Value	Description
A	A	Agency Non-Program Trade
B	A	Customer Range Account of a Broker/Dealer
C	P	Member-To-Member Non-Index Arbitrage Program Trade
D	P	Member-To-Member Index Arbitrage Program Trade
E	P	Short exempt transaction for the proprietary account of the clearing member organization or an affiliated member/member organization.
F	P	Short exempt transaction for the proprietary account of an unaffiliated member organization, including any other self-clearing member organization.
G	P	Registered Trader
H	I	Short exempt transaction for the account of an individual investor
I	I	Individual Customer Non-Program Trade
J	I	Individual Customer Index Arbitrage program trade
K	I	Individual Customer Non-Index Arbitrage Program Trade
L	P	Short exempt transaction for the account of a competing market-maker that is affiliated with the clearing member organization.
M	P	Unaffiliated Member-To-Member Index Arbitrage Program Trade
N	P	Unaffiliated Member-To-Member Non-Index Arbitrage Program Trade
O	P	Proprietary transaction for a competing market-maker that is affiliated with the clearing member organization
P	P	Member-To-Member Principal Non-Program Trade
R	P	Transaction for the account of a non-member competing market-maker
S	P	Specialist Non-Program Trade
T	P	Transaction for the account of an unaffiliated member's competing market-maker
U	A	Other Agency Index Arbitrage Program Trade
W	A	Unaffiliated Member-To-Member Agency Non-Program Trade
X	P	Short exempt transaction for the account of an unaffiliated member's competing market-maker
Y	A	Other Agency Non-Index Arbitrage Program Trade
Z	P	Short exempt transaction for the account of a non-member competing market-maker