Cboe FX FIX Specification

Programming Reference

Version v6.33

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Cboe FX
FIX Specification v6.33

Contents

1 Introduction

1.1 Supported FIX Versions

Cboe FX FIX Gateway currently supports the FIX Protocol Version 4.2. *Note, however, that the values of Tags 553 and 554 are actually those of FIX Protocol Version 4.3. Tags 39, 150, and 102 are actually those of FIX Protocol Version 4.4.*

Cboe FX makes use of Cboe-defined Tags in our FIX implementation. The list below captures these Tags and which products/platforms make use of them.

Tag	Spot ECN	Spot FA	NDF ECN	NDF FA
6997		x		x
6998		x		x
6999		x		x
7000		x		x
7001		x		x
7002	x		x	
7224			x	
7225	x		x	
7226	x	x	x	x
9008			x	x
9009			x	x
9010			x	x
9011			x	x
9012			x	
9020			x	x
9021				x
9030			x	x
9031			x	x
9032			x	x
9110	x		x	
9039			x	x
9111	x		x	
9112	x		x	
25004			x	x

1.2 Hours of Operation

All times are represented in Eastern Time (ET), which uses EST (UTC-05) during fall/winter and EDT (UTC-04) during spring/summer months when daylight saving time is observed. The window between disconnect and restart is approximate and is subject to change.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Disconnect	5:00PM	5:00PM	5:00PM	5:00PM	5:00PM	N/A	N/A
Restart	5:04PM	5:04PM	5:04PM	5:04PM	N/A	N/A	5:04PM

Cboe SEF Restart	5:30PM	5:30PM	5:30PM	5:30PM	N/A	N/A	5:00PM

1.3 Network Connection

Cboe FX supports a number of connectivity options including the Internet, leased lines, VPN, and third-party networks.

Third party networks include firms such as Radianz, GuavaTech, Yipes, and TNS. The client should be prepared to provide Cboe FX source IP addresses for all servers that will be establishing connectivity to Cboe FX. Cboe FX's connectivity team will help our clients establish connectivity through a standard onboarding process.

Customers should consult the latest copy of the Cboe FX Connectivity Manual on the Cboe FX website.

1.4 Security and Encryption

Cboe FX requires using secure socket layer (SSL) for any client that chooses to connect to Cboe FX FIX Gateway through the Internet.

1.5 Message Types

The Following FIX messages are understood by the system:

Type	Description	Spot & NDF ECN	Full Amount
0	HeartBeat	Y	Y
1	TestRequest	Y	Y
2	ResendRequest	Y	Y
3	Reject	Y	Y
4	SequenceReset	Y	Y
5	Logout	Y	Y
8	ExecutionReport	Y	Y
9	OrderCancelReject	Y	N
A	Logon	Y	Y
D	NewOrderSingle	Y	Y
F	OrderCancelRequest	Y	N
G	OrderCancelReplaceRequest	Y	N
H	OrderStatusRequest	Y	N
R	QuoteRequest	N	Y
S	Quote	Y	Y
Z	QuoteCancel	Y	Y
b	QuoteAcknowledgement	Y	N
j	BusinessMessageReject	N	Y
AG	QuoteRequestReject	N	Y
AJ	QuoteResponse	N	Y

1.6 Tag Notes

Tag	Description	Notes
58	Text	Freeform text that is for informational purposes only. Clients should not be coding to the exact value of this field. Cboe FX retains the right to change the value sent in this field.
*		Optional
†		Part of a repeating group

1.7 Data Types Used in All FIX Messages

Type	Format	Example
Int	Integer	9999
Float	Numeric digits with optional decimal point and sign character.	-2000.00000000000 -2000 -2000.
Qty	Quantity: see float	
Price	Price: see float	
Price Offset	Price Offset: see float	
Amt	Amount: see float	
Char		
Boolean	Single Character Y or N	
String	Case Sensitive Alphanumeric characters with no terminating character	
UTC Date/Time	GMT Date/Time: YYYYMMDD-HH:MM:SS	20010101-22:30:00
UTC Date	GMT Date: YYYYMMDD	20010101
UTC Time	GMT Time: HH:MM:SS	22:30:00

1.8 Automatic Cancel on Disconnect

Sessions connecting to a Cboe FX FIX Gateway are configured for cancel on disconnect. All open orders are automatically canceled when a customer logs out from a Cboe FX FIX Gateway or disconnects. Open orders are also automatically canceled at the end of each trading session when the Cboe FX FIX Gateway restarts. See the Hours of Operation Section (1.2) for additional information on gateway start and stop times.

1.9 Intraday Value Date Changes

Cboe rolls forward settlement dates for PHP and NZD instruments during the trading day in accordance with market convention.

1. PHP NDF Pairs have their settlement date rolled forward Monday to Friday at 10 AM GMT. At the time of the roll, customers connected to a NDF FIX Proxy session will have outstanding PHP orders canceled. Additionally, all users connected to a NDF FIX Proxy session will receive an asynchronous Security List Message indicating the new settlement and fixing dates for the updated

PHP instruments. Customers are required to use the new settlement and fixing dates for any orders that are subsequently entered to the platform. Customers should refer to the *Security List Message* in *Section 8.2* for further details.

2. NZD Spot Pairs are rolled forward Monday to Friday at 7 AM Auckland Time. No additional messaging is sent to customers to notify them of the roll.

1.10 NDF Overview

1.10.1 Tenors

Tenor	Short Code
Spot	SP
Overnight	ON
1 Week	1W
2 Weeks	2W
3 Weeks	3W
1 Month	1M
2 Months	2M
3 Months	3M
6 Months	6M
9 Months	9M
1 Year	1Y
Near IMM Date	IMM1
2nd IMM Date	IMM2
3rd IMM Date	IMM3
4th IMM Date	IMM4
BMF Bovespa Nearest Month	BMF1
BMF Bovespa Second Nearest Month	BMF2

1.10.2 Security ID Construction

NDF contracts are generally defined as *Currency_Tenor*. The *Currency* should be in full *CCY1CCY2* format. Only tenor values from the above section are acceptable.

Cboe SEF does not support any other naming convention for contracts. Valid and invalid examples are provided below for reference:

Contract (Security ID)	Validity	Comments
USDINR_1M	VALID	
USDINR1M	INVALID	The contract should always include the underscore character to delimit the underlying instrument and tenor.
USDINR_2Y	INVALID	The tenor is not a Cboe FX supported tenor.

1.10.3 Security ID & Symbol

Cboe SEF requires both the SecurityID and Symbol fields in applicable FIX messages. The Symbol field (Tag 55) should indicate the underlying instrument currency pair as *CCY1/CCY2*. SecurityID (Tag 48) should indicate the specific NDF product, such as USDINR_1M. Note the SecurityID field does not include a forward slash '/' separator between the deal and counter currencies.

1.10.4 NDF Quantity Restriction: Non-Firm Order Size Requirements

All orders entered by an account that is configured to be non-firm are subject to a minimum deal quantity of 500,000. Orders not meeting this requirement will be rejected.

2 Overview – Quick Reference

The following provides a quick reference to relevant sections while coding to the Cboe FX FIX Proxy Specification.

All Sessions Are Required to Implement:

- FIX Protocol version as defined in the below table.

- *General FIX Message Structure* in *Section 3*.

- *Administrative Messages* in *Section 4*.

Cboe Central:

- The Cboe Central Order Book:

    – Is only supported for specific currency pairs.

    – Has Order Size and Price Precision requirements.

    – Enforces an MQL.

    – Is a firm order book.

    – Has a market data delay depending on your depth in the book.

- Cboe Central only supports order entry from *New Order Single Messages in Section 6.1.1*. Customers cannot submit prices using the Streaming Quotes API.

- To update prices on the order book, customers must first submit an *Order Cancel Request* as detailed in *Section 11.1*. Customers may then submit a New Order Single with the updated pricing.

- Customers should contact the Cboe FX Trade Desk for the latest Cboe Central contract specification document which contains the latest contract specs.

NDFs Only:

- All sessions must implement *NDF Instrument Messages* as defined in *Section 8,* specifically the *NDF Security List Message* in *Section 8.2*. **The NDF Security List Message can be asynchronously sent by the server while the session is active.**

    – The exception to this rule is NDF Full Amount Making sessions. Consult the *Reference Table* in Section 2.1, below.

2.1 Reference Table

	FIX Version	Market Maker Streaming Quotes	Taker New Order Single
Spot ECN	FIX.4.2	• *Streaming Quotes* in *Section 5.1* • *Execution Report* in *Section 7.1*	• *Order Entry Messages* in *Section 6.1* • *Order Cancel Messages* in *Section 11* • *Execution Report* in *Section 7* • ***Optional:*** *Order Status Request* in *Section 12.1*
Cboe Central (Spot)	FIX.4.2	Market Making and Taking for Cboe Central uses the same order entry API. • *Order Entry Messages* in *Section 6.1* • *Order Cancel Request* in *Section 11.1* • *Execution Report* in *Section 7* • ***Optional:*** *Order Status Request* in *Section 12.1* **Unsupported Messages:** • *Streaming Quotes* in *Section 5.1* • *Order Cancel Replace Request* in *Section 11.2*	
Spot & NDF Full Amount	FIX.4.2 (Spot FA Taking) FIX.4.4 (All Other)	• *Full Amount Quoting* in *Section 5.3* • *Full Amount Maker Trade Notification* in *Section 6.2.2* • *Full Amount Maker Execution Report – Trades & Timeout* in *Section 7.2*	• *Full Amount New Order Single Message* in *Section 6.2.1* • *Execution Report* in *Section 7.1.3* • **Applies only to NDFs (Cboe SEF):** *Security List Message* in *Section 8.2* • ***Optional for NDFs:*** *Security List Request Message* in *Section 8.1*
NDF ECN	FIX.4.4	• **Required:** *Security List Message* in *Section 8.2* • *Streaming Quotes* in *Section 5.2* • *Execution Report* in *Section 7* • ***Optional:*** *Security List Request Message* in *Section 8.1*	• **Required:** *Security List Message* in *Section 8.2* • *Order Entry Messages* in *Section 6.1* • *Order Cancel Messages* in *Section 11* • *Execution Report* in *Section 7* • ***Optional:*** *Order Status Request* in *Section 12.1* • ***Optional:*** *Security List Request Message* in *Section 8.1*

3 General FIX Message Structure

The Standard Header and Standard Trailer are required on all FIX messages. MsgType (FIX 35) is part of the header.

3.1 Standard Header

TAG	FieldName	Contents	Comments
8	BeginString	FIX.4.2(.X) FIX.4.4(.X)	Protocol Version. Refer to the supported version for the order book you are attempting to access.
9	BodyLength	99999	Length of Message Body
35	MsgType	Accepted Message Types	0 = HeartBeat 1 = TestRequest 2 = ResendRequest 3 = Reject 4 = SequenceReset 5 = Logout 8 = ExecutionReport 9 = OrderCancelReject A = Logon D = NewOrderSingle F = OrderCancelRequest G = OrderCancelReplaceRequest H = OrderStatusRequest R = QuoteRequest S = Quote Z = QuoteCancel b = Quote Acknowledgement j = BusinessMessageReject AG = QuoteRequestReject AJ = QuoteResponse
34	MsgSeqNum		Message Sequence Number (Resets to 1 at the start of each trading day)
49	SenderCompID	BIGFUND SMALLFUND HSFX	Sender Company ID (MMID of message sender)
50	SenderSubID	User1 User2	Cboe FX User ID
56	TargetCompID	BIGFUND SMALLFUND HSFX	Target Company ID (MMID of message receiver)
43*	PossDupFlag		Indicates possible retransmission of this seq num
97*	PossResend		Indicates possible retransmission of msg under a New sequence number

TAG	FieldName	Contents	Comments
52	SendingTime		GMT Date/Time Message was sent. This value should ideally contain milliseconds. It must be within 2 minutes of system time on the FIX Proxy in order for the message not to be rejected. Since the FIX Proxy is NTP synched, any sender should probably be NTP synched as well.

3.2 Standard Trailer

TAG	FieldName	Contents	Comments
10	CheckSum		Integer byte count of message length without the CheckSum field

4 Administrative Messages

4.1 Logon – From Client

TAG	FieldName	Contents	Comments
35	MsgType	A	(Contained in header)
553	Username	(FIX 4.3 usage)	Cboe FX username (or Cboe FX collat)
554	Password	(FIX 4.3 usage)	Password for id in Tag#553
98	EncryptMethod	0	None
108	HeartBtInt		Client Hearbeat Interval (In seconds) Client will be logged off after two missed heartbeats
141*	ResetSeqNumFlag	N	Indicates the intention to reset sequence numbers on both sides of the connection. Setting this field will prevent resequencing from occurring. Client Logon messages with 141=Y are HIGHLY discouraged other than on initial daily logon. The reason is that it is possible for trades to be sent to but never received by a client during a network ouTage. If a client does not choose to manually ack trades (see section 9), Cboe FX will assume that those trades have been received by the client. If, in this scenario, a client resequences correctly on logon, they will be resent the missed trades. However, if the client's logon message contains 141=Y, resequencing will not occur, and the missed trades will not be resent.

4.2 Logon – Response From Cboe FX

TAG	FieldName	Contents	Comments
35	MsgType	A	(Contained in header)
98	EncryptMethod	0	None
108	HeartBtInt	60	Clients should use a 30 second Heartbeat Interval.

4.3 HeartBeat – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	0	(Contained in header)
112*	TestReqID		Required in response to a Test Request

4.4 TestRequest – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	1	(Contained in header)
112	TestReqID		Auto-Generated Request ID

4.5 Resend – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	2	(Contained in header)
7	BeginSeqNo		
16	EndSeqNo		0 means +infinity

- Clients should **NEVER** resend previously sent messages, including old prices, in response to a resend request from Cboe FX. A GapFill message should be used instead.

- **The Cboe FX FIX Gateway only responds to Resend messages with confirmed trades.**
- Trades which are sent in response to a Resend request are **not** sent with a PossDupFlag (43=Y).

- Clients are urged to send Resend requests sparingly. Cboe FX encourages customers to connect to a Cboe FX FIX Drop Copy gateway as a secondary method of receiving trades and to reduce the need for Resend requests. Customers interested in this functionality should reach out to the Cboe FX Trade Desk for further information.

4.6 Reject – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	3	(Contained in header)
45	RefSeqNum		MsgSeqNo of Rejected Message
371*	RefTagID		
372*	RefMsgType		
373*	SessionRejectReason		
58*	Text		

4.7 Business Message Reject – From Cboe FX

Used in Full Amount only.

TAG	FieldName	Contents	Comments
35	MsgType	j	(Contained in header)
45	RefSeqNum		MsgSeqNum of rejected message
372	RefMsgType		The MsgType of the FIX message being references
380	BusinessRejectReason	0 = Other	
58	Text		Reject reason

4.8 SequenceReset/GapFill – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	4	(Contained in header)
36	NewSeqNo		Next expected Sequence Number
123∗	GapFillFlag	'Y' or 'N'	The use of 'Y' is required for common resequencing. 'N' is not recommended and should only be used in emergency situations that require manual intervention. 'N' causes the SeqNo of the SequenceReset message to be ignored, creating a high possibility of message loss.

4.9 Logout – From Cboe FX and Client

TAG	FieldName	Contents	Comments
35	MsgType	5	(Contained in header)
58∗	Text		Indicates reason for logout

5 Streaming Quotes

5.1 Spot ECN

A client can be enabled to stream quotes to Cboe FX. Cboe FX will not send an acknowledgment to indicate the receipt of the quote.

5.1.1 Quote – From Client

Use this message to stream up to two orders (one per side) in the same symbol of LMT type at a time. A new quote in a CboeFXQuoteLayer <7225> automatically cancels the orders from the previous submission on the same CboeFXQuoteLayer before submitting new orders. The client manages the value of CboeFXQuoteLayer. To cancel an individual layer of quotes for a symbol, set BidPx and OfferPx to 0. Canceling only one side of a given layer can be accomplished by setting either the BidPx *or* OfferPx to 0. The layer whose price(s) are canceled is specified by the value in Tag 7225.

TAG	FieldName	Contents	Comments
117	QuoteID	String	Printable ASCII characters excluding |, ‘, “, :, ; and #, which must not exceed 20 characters. Must be unique for each 35=S received for a trading day. The field is used to identify the quote in a trade execution report, similar to the ClOrdID for an order.
35	MsgType	S	(Contained in header)
55	Symbol	String	CCY1/CCY2. One symbol per stream quotes message. Example: *EUR/USD*.
7225	CboeFXQuoteLayer	Integer = [1,n]	Indicate the layer into which the quote is streaming. Cboe FX entitles the client with a maximum layer n.
132*	BidPx	1.23456 or 0	Either Tag pair 132+134 or Tag pair 133+135 must be present, or both must be present. When value = 0, Tag 134 is ignored; the previous bid for this quote ID is pulled and no new bid is submitted.
134*	BidSize		Quantity of CCY1.
133*	OfferPx	1.23456 or 0	Either Tag pair 132+134 or Tag pair 133+135 must be present, or both must be present. When value = 0, Tag 135 is ignored; the previous offer for this quote ID is pulled and no new offer is submitted.
135*	OfferSize		Quantity of CCY1.

Either Tag pair 132 & 134 or Tag pair 133 & 135 must be present, or both must be present. When price (132 or 133) value is 0, the respective quantity is ignored.

5.1.2 Quotes Cancel/Acknowledgment – From Server

Server sends this message only to indicate errors. If a rejection occurs and Tag 295 is not present, the entire quote is rejected. The presence of Tag 295 and its requisite members is used to indicate that rejection has occurred on one or more sides of a quote.

TAG	FieldName	Contents	Comments
117	QuoteID		Same as Tag 117 from 5.1.1 Quote Msg
35	MsgType	b (lower case)	(Contained in header)
297	QuoteAckStatus		5 - rejected
300*	QuoteRejectReason	Value = 1,2,5,8,99	1 - unknown symbol 2 - symbol closed 5 - unknown quote 8 - invalid price or quantity 99 - other
58*	Text	Free text	Reason from list below if Tag 300=8: wrong bid price (132); wrong offer price (133); missing bid size (134); missing offer size (135); wrong bid size (134); wrong offer size (135); bid size (134) less than 1000000; offer size (135) less than 1000000.
295*	NoQuoteEntries	Integer >= 1	Only present in certain rejection messages.
54*	Side		Indicates the side(s) rejected. Only present in certain rejection messages.

5.1.3 Quotes Cancel – From Client

The Quote Cancel message is intended for customers to cancel multiple quotes with a single message. Quote Cancels initiated from the client will not receive a response from Cboe FX.

TAG	FieldName	Contents	Comments
117	Quote Cancel ID		Client cancel ID
35	MsgType	Z	(Contained in header)
298	QuoteCancelType	1,4	1 - Cancel Symbols specified by 295 repeating group 4 - Cancel all quotes
295*	NoQuoteEntries	Integer >= 1	Number of Symbols (specified by repeating Tag 55's) to cancel.
>> 55*	Symbol	String	CCY1/CCY2. All quotes for a particular symbol will be canceled. Example: *EUR/USD*.

5.2 NDF ECN

5.2.1 Quote – From Client

Use this message to stream multiple (one per side) in the same symbol of LMT type at a time. Cboe FX allows clients to send multiple quote updates in a single quote message. The number of quote changes is indicated by the HSFXQuoteUpdateCount Tag. A new quote in a CboeFXQuoteLayer automatically cancels the orders from the previous submission on the same CboeFXQuoteLayer before submitting new orders. The client manages the value of CboeFXQuoteLayer. To cancel an individual layer of quotes for a symbol, set BidPx and OfferPx to 0. Canceling only the Bid *or* Offer for a specific layer can be accomplished by setting only the BidPx *or* OfferPx to 0.

TAG	FieldName	Contents	Comments
35	MsgType	S	(Contained in header)
1*	Account		Free-text field meant to contain 3rd party account ID. 20 character maximum.
117	QuoteID	String	Printable ASCII characters excluding |, ', ", :, ; and #, which must not exceed 20 characters. Must be unique for each 35=S received for a trading day. The field is used to identify the quote in a trade execution report, similar to the ClOrdID for an order.
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. Example: *USDKRW_1M*
55	Symbol	String	Underlying instrument symbol in terms of CCY1/CCY2. Example: *EUR/USD.* Required if SecurityListRequestType (559)
64	SettleDate	Integer	YYYYMMDD settlement date of the instrument.
9020	FixingDate	Integer	YYYYMMDD fixing date of the instrument.
7224	HSFXQuoteChangeCount	Integer = [1,n]	The number of quote changes being sent in this message.
>> 7225	CboeFXQuoteLayer	Integer = [1,n]	Indicate the layer into which the quote is streaming. Cboe FX entitles the client with a maximum layer n.
>> 132†*	BidPx	Price or 0	Limit Price. Example: 1.23456
>> 134†*	BidSize		Quantity of CCY1
>> 133†*	OfferPx	Price or 0	Limit Price. Example: 1.23456
>> 135†*	OfferSize		Quantity of CCY1

TAG	FieldName	Contents	Comments
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

Either Tag pair 132 & 134 or Tag pair 133 & 135 must be present, or both must be present. When price (132 or 133) value is 0, the respective quantity is ignored; the previous side for this quote ID is pulled when no new side is submitted.

Cboe FX performs validation of the SecurityID, SettleDate, and FixingDate submitted on a customer's Quote message. Quote messages containing Settlement and FixingDate definitions which do not match Cboe FX static data are rejected. Prior to submitting a Quote message, customers should confirm the SecurityID, SettleDate, and FixingDate values are consistent in definition with the instrument they wish to trade.

5.2.2 Quote Reject – From Server

Cboe FX sends quote reject messages in the case of an invalid quote message. If a rejection occurs and Tag 295 is not present, the entire quote is rejected. The presence of Tags 295 and 7225 are used to indicate that rejection has occurred on one or more sides and/or layers of a quote.

TAG	FieldName	Contents	Comments
35	MsgType	b	(Contained in header)
117	QuoteID	String	Printable ASCII characters excluding |, ', ", :, ; and #, which must not exceed 20 characters. Must be unique for each 35=S received for a trading day. The field is used to identify the quote in a trade execution report, similar to the ClOrdID for an order.
297	QuoteAckStatus	5 = Rejected	
300*	QuoteRejectReason	Integer	1 = Unknown Symbol 2 = Symbol Closed 5 = Unknown Quote 8 = Invalid Price or Quantity 99 = Other

TAG	FieldName	Contents	Comments
58*	Text		May contain additional reject details.
22	SecurityIDSource	8 = Exchange	
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. Example: *USDKRW_1M*
55	Symbol	String	Underlying instrument symbol in terms of CCY1/CCY2. Example: *EUR/USD*. Required if SecurityListRequestType (559)
64	SettleDate	Integer	YYYYMMDD settlement date of the instrument.
167	SecurityType	NDF	
9010	ProductComplex	3 = FX NDF	
295*	NoQuoteEntries	Integer >= 1	Only present in certain rejection messages.
>> 7225†*	CboeFXQuoteLayer	Integer	Indicates the quote layer(s) rejected. Only present in certain rejection messages.
>> 54†*	Side	Integer	Indicates the side(s) rejected. Only present in certain rejection messages.

5.2.3 Quote Cancel – From Client & Server

The Quote Cancel message is intended for customers to cancel multiple quotes with a single message.
Cboe FX uses the message to cancel invalid quotes during an instrument update.

TAG	FieldName	Contents	Comments
35	MsgType	Z	(Contained in header)
117*	QuoteID	String	Same as Tag 117 from Quote message. Required if 298 = 5.
298	QuoteCancelType	Integer	4 = Cancel All Quotes 5 = Cancel Quote Specified in ID
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required from Client effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

5.3 Full Amount Maker

5.3.1 Full Amount Quote Request – From Cboe FX

TAG	FieldName	Contents	Comments
131	QuoteReqID		Unique Full Amount Quote Request Identifier
35	MsgType	R	(Contained in header)
Component Block <QuotReqGrp>			
146	NoRelatedSym	1	
Component Block <Instrument>			
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined as CCY1/CCY2. Example: *EUR/USD.*
65	SymbolSfx	SPOT NDF	
end Component Block <Instrument>			
54*	Side	1 = Buy 2 = Sell	Two-way if not specified. If specified, Side always indicates the direction of CCY1 from Tag 55. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000. The side indicates the intent from client's (not market maker's) perspective.
38*	OrderQty		The order amount in the currency specified in Tag 15. This field is only required for Non-persistent Full Amount (Tag 7001 is not set).
64*	SettlDate		Value date.
15	Currency		Deal currency of the request. CCY1 from Tag 55. Example: EUR
9020	FixingDate		YYYYMMDD fixing date of the instrument. **Applies only to NDFs (Cboe SEF).**
9021	FixingSource	String	Fixing Source. **Applies only to NDFs (Cboe SEF).**
Component Block <Parties>			Parties block is only required for Non-persistent Full Amount (Tag 7001 is not set)
453*	NoPartyIDs	2	
>> 448†*	PartyID	Cboe FX client identifier.	Case insensitive
>> 452†*	PartyRole	1 = Executing Firm (Client Prime Broker) 3 = Client ID	
end Component Block <Parties>			

TAG	FieldName	Contents	Comments
end Component Block <QuotReqGrp>			
6997	N/A	0	
6999	N/A	1	
7001*	Persistent	1	Indicates that this is a persistent stream request, if specified.
Component Block <MDEntries>			Parties block is only required for Persistent Full Amount (Tag 7001 is set)
268*	NoMDEntries		Number of requests
>> 269†*	MDEntryType	0 = Bid 1 = Offer	
>> 271†*	MDEntrySize		Tier size in Currency (Tag 15) Example: 25 million (Tag 271=25000000)
end Component Block <MDEntries>			

5.3.2 Full Amount Quote Request Reject – From Market Maker

TAG	FieldName	Contents	Comments
131	QuoteReqID		Same as Tag 131 from Quote Request msg.
35	MsgType	AG	(Contained in header)
658	QuoteRequestReject Reason	1 = Unknown Symbol 2 = Exchange closed 3 = Quote Request exceeds limit 4 = Too late to enter 6 = Not authorized to request quote 7 = No match for inquiry 8 = No market for instrument 99 = Other	
146	NoRelatedSym	0	Required by FIX 4.4, but not used.
58*	Text		Indicates reason for rejection

5.3.3 Full Amount Quote – From Market Maker

TAG	FieldName	Contents	Comments
131	QuoteReqID		Same as Tag 131 from Quote Request msg.
35	MsgType	S	(Contained in header)
117	QuoteID		Printable ASCII characters excluding |, ', ", :, ; and #, which must not exceed 20 characters.

TAG	FieldName	Contents	Comments
			Must be unique for each 35=S received for a trading day. The field is used to identify the quote in a trade execution report, similar to the ClOrdID for an order.
Component Block <Instrument>			
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined as CCY1/CCY2. Example: *EUR/USD*.
end Component Block <Instrument>			
64	SettlDate		Value date. **Applies only to NDFs (Cboe SEF).**
9020	FixingDate		YYYYMMDD fixing date of the instrument. **Applies only to NDFs (Cboe SEF).**
132*	BidPx		Bid all-in rate for spot or forward. Required if QuoteRequest Side(54) = 2 or not specified. For spot quotes this value is the same as Tag 188.
133*	OfferPx		Offer all-in rate for spot or forward. Required if QuoteRequest Side(54) =1 or not specified.
188*	BidSpotRate		Spot rate for spot quote or the spot component of a quote for a forward. Required if QuoteRequest Side(54) =2 or not specified.
190*	OfferSpotRate		Spot rate for spot quote or the spot component of a quote for a forward. Required if QuoteRequest Side(54) =1 or not specified.
189*	BidForwardPoints		Bid forward points for forward quotes. Example: 1.234 would mean 1.234 pips. Required if QuoteRequest SymbolSfx(65) = FWD and Side(54) =2 or not specified.
191*	OfferForwardPoints		Offer forward points for forward quotes. Example: 1.234 would mean 1.234 pips. Required if QuoteRequest SymbolSfx(65) = FWD and Side(54) = 1 or not specified.
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required from Client effective December 15, 2023.

TAG	FieldName	Contents	Comments
			As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**
Component Block <MDEntries>			Parties block is only required for Persistent Full Amount Stream (Tag 7001 is set in Quote Request message)
268*	NoMDEntries		Number of quotes
>> 269†*	MDEntryType	0 = Bid 1 = Offer	
>> 270†*	MDEntryPx		Quote price. Setting this to 0 will cause a quote to be canceled. Quotes remain on the book unless explicitly canceled.
>> 271†*	MDEntrySize		Quote size. Example: 25 million (Tag 271=25000000)
>> 299†*	QuoteEntryID		A string of printing ASCII characters. Must be unique within a trading day. '|', single-quote, double- quote, colon, semi-colin, and # characters cannot be used. Cannot exceed 20 characters.
End Component Block <MDEntries>			

5.3.4 Full Amount Quote Cancel – From Market Maker

The Quote Cancel message is intended for customers to cancel multiple quotes with a single message.

TAG	FieldName	Contents	Comments
131	QuoteReqID		Same as Tag 131 from Quote Request msg.
35	MsgType	Z	(Contained in header)
298	QuoteCancelType	4	Required by FIX 4.4, but not used.
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

6 Order Entry Messages

6.1 Spot ECN, NDF ECN, & Cboe Central (Spot)

6.1.1 New Order Single – From Client

Note: For NDF only, All Orders must be submitted in Settlement Currency terms, in Notional Amounts with whole integers.

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and under-scores	Alphanumeric field meant to contain 3rd-party account ID. This will be returned with any ExecutionReport generated by this order.
35	MsgType	D	(Contained in header)
11	ClOrdID	Client Order ID (0 is not allowed)	Printable ASCII only. Cboe FX recommends customers use values that are unique within a trading day. |,single-quote, and double-quote characters cannot be used. ClOrdID is case sensitive, so the same case must be used to cancel an order.
18*	ExecInst	MultipleValueString	Only used with pegged orders to specify peg type. Supported values: P = Market Peg: peg along opposite side of market R = Primary Peg: peg along same side of market M= Indicates a peg to mid **(Peg-to-mid not supported for NDFs).**
21	HandlInst	1	Required by FIX 4.2 but not used. Example val 2
15*	Currency		This represents the denomination of the quantity (OrderQty) field. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000 **Note:** For NDF only, All Orders must be submitted in Settlement Currency terms, in Notional Amounts with whole integers.
38	OrderQty		If Tag 15 is present: Qty of currency in Tag 15. Qty of currency 1 otherwise

TAG	FieldName	Contents	Comments
210*	MaxShow		The order amount to show on market data. Market data will continue to show this amount as trades lower the outstanding order quantity until the order quantity is less than this value. The default show amount is the value in Tag 38. Value is in the same currency as Tag 38. The minimum value of Tag 210 depends on account configuration with the default being 1 million. If the value for Tag 38 is greater than the minimum configured value, then the value in Tag 38 must be >= the value for Tag 210. Hidden orders (value of 0) are possible depending on account configuration. Hidden orders are restricted by a minimum value of 250,000 for Tag 38.
110*	MinQty		Minimum trade quantity in the same currency as Tag 38. If larger than the value of Tag 38, Cboe FX uses the value of Tag 38 as the MinQty. If the OrderQty drops below this quantity due to a fill, the order will be automatically canceled.
44	Price	1.51234	See Data Types for Maximum Precision. Price is ignored for market orders (OrdType=1/C). This also serves as a limit for pegged orders.
54	Side		1 = Buy 2 = Sell Side indicates direction relative to Symbol (Tag 55) and **not** the Currency (Tag 15).
55	Symbol	String	The symbol is defined by CCY1/CCY2. Example: *EUR/USD*.
40	OrdType		1 = Market (Market orders must have TimeInForce = 3) 　　　(**Unsupported for Cboe Central**) 2 = Limit C = Market (same as '1')) 　　　(**Unsupported for Cboe Central**) F = Limit (same as '2') P = Pegged 　　　(**Unsupported for Cboe Central**)
59*	TimeInForce		0 = Day, Good through normal Market Hours. (5:30pm EST to 17:00 ET)(Default if Unspecified) 3 = Immediate Or Cancel
60*	TransactTime		Time Order was Initiated

TAG	FieldName	Contents	Comments
211*	PegDifference	Price	Peg offset, which follows the price precision of the Price (Tag 44). The precision of the field is **not** in pips. Added to Best Offer on Peg Market Buys and Peg Primary Sells. Added to Best Bid on Peg Primary Buys and Peg Market Sells. Default value is 0.00.
7002*	PegMidMatch	Integer	0 = Cannot Match at Mid (default) 1 = Can Match at Mid Indicates if the peg is allowed to match at mid.
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. Example: *USDINR_1M*. **Applies only to NDFs (Cboe SEF).**
64	SettleDate	Integer	YYYYMMDD settlement date of the instrument. **Applies only to NDFs (Cboe SEF).**
9020	FixingDate	Integer	YYYYMMDD fixing date of the instrument. **Applies only to NDFs (Cboe SEF).**
9110*	AlgoUrgency	Integer	1 = Low (default for Algo sessions) 2 = Medium 3 = High Indicates the priority of the algo order. **Optional for Algo Orders.**
9111*	AlgoUrgent LimitPrice	Price	Price which triggers an algo order to go to High urgency. **Optional for Algo Orders.**
9112*	AlgoSuspend LimitPrice	Price	Price which triggers an algo order to be suspended. **Optional for Algo Orders.**
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

Clients who would like to automatically convert New Order Single to XTX_Algo orders at the session level should contact the Cboe FX Trade Desk for additional information.

6.1.2 Market Orders

On Cboe FX, all Market Orders (40=1 or 40=C) are treated as having an IOC TimeInForce (59=3). On the Cboe FX Spot ECN, a TimeInForce of Day (59=0) is accepted for Market Orders but treated from a

matching perspective as IOC. On all other Cboe FX platforms Market Orders without an IOC TimeInForce are rejected.

6.1.3 Algo Orders

Cboe FX provides clients access to an FX Algo offered by XTX Markets using the Cboe FX New Order Single message. Clients who are interested in accessing the FX Algo are advised to contact the Cboe FX Trade Desk or their Director of Sales for further information.

- Access to the FX Algo is limited to select order entry sessions. Clients should contact the Cboe FX Trade Desk to find out more information.

- Both Limit Day Orders (40=2, 59=0) and Limit IOC Orders (40=2, 59=3) are accepted Algo order types, though both behave as Limit Day Orders. Clients should make use of *Order Cancel Messages* in *Section 11* to cancel algo orders.

- *Order Cancel Replace Requests* in *Section 11.2* are **not** supported for algo orders.

- Tags AlgoUrgency (9110), AlgoUrgentLimitPrice (9111) and AlgoSuspendLimitPrice (9112) are custom Tags optional for Algo orders.

  Example 1: Market offer price is currently 25, enter an order to Buy, Urgency=Low, UrgentLimit=10

  If the market gets to 10 (UrgentLimit level) or below, the Urgency increases to High; once it returns to above 10 the order reverts to the original urgency (Low).

  Example 2: Market bid price is currently 30, enter an order to Sell, Urgency=Medium, UrgentLimit=35

  If the market gets to 35 (UrgentLimit level) or above, the Urgency increases to High; once it returns to below 35 the order reverts to the original urgency (Medium).

  Example 3: Market offer price is currently 35, enter an order to Buy, Urgency=Low, SuspendLimit=40

  If the market gets to 40 (SuspendLimit level) or above, the order is suspended, once it returns to below 40 the order resumes.

  Example 4: Market offer price is currently 20, enter an order to Buy, Urgency=Low, SuspendLimit=30, UrgentLimit=10

  If the market gets to 30 (SuspendLimit level) or above, the order is suspended; once it returns to below 30 the order resumes. If the market gets to 10 or below, the urgency increases to High, and reverts to the original urgency once the market returns to above 10.

  Clients who would like to have the values of Tags 9110, 9111, and 9112 applied automatically to their FIX Order Entry session should reach out to the Cboe FX Trade Desk for additional information.

- Clients can be configured to receive TCA reporting for live orders upon request to the Cboe FX Trade Desk.

6.1.4 Peg Orders

Peg orders are placed by supplying P in OrderType (40), either P or R in ExecInst (18) and an offset price in PegDifference (211). TimeInForce (59) must be DAY. If a nonzero Price (44) is submitted, the pegged price will not exceed this price.

PegDifference (211) allows a client to define the price of their peg order relative to the top of book price. The value of the Tag is **not** in pips and follows the same price precision as Price (44). The sign of the field indicates if the offset should be additive or subtractive from the best bid or best offer price.

Consider the following peg order examples. In each example, the Cboe FX top of book prices for EUR/USD are 1.17183 (bid) - 1.17186 (offer).

- *Primary Peg, Less Aggressive than Same Side Top Of Book:* A EUR/USD Buy (54 = 1) Primary Peg Order (40 = P, 18 = R) has an offset of -0.00001 (211 = -0.00001). The calculated price of the order would be 1.17182.

- *Primary Peg, More Aggressive than Same Side Top Of Book:* A EUR/USD Buy (54 = 1) Primary Peg Order (40 = P, 18 = R) has an offset of 0.00001 (211 = 0.00001). The calculated price of the order would be 1.17184.

- *Market Peg, More Aggressive than Opposite Side Top Of Book:* A EUR/USD Sell (54 = 2) Market Peg Order (40 = P, 18 = P) has an offset of 0.00001 (211 = 0.00001). The calculated price of the order would be 1.17182.

Customers have the option to configure a peg offset by currency pair. Please contact the Cboe FX Trade Desk to set up.

For Spot and NDF ECN, customers can flag their pegs to match at mid using PegMidMatch (7002). When the PegMidMatch Tag is omitted, pegged orders by default cannot match at mid. The Cboe FX Trade Desk can configure a FIX Order Entry session to have all pegged orders enabled for match at mid, in which case Tag 7002=1 is not required for all pegged orders. Customers should contact the Cboe FX Trade Desk to have this behavior enabled on their FIX Order Entry session.

For Spot and NDF ECN, if a customer sends us a peg order without a limit price (44=0 or no 44), the ACK we send back for the peg order will contain the first limit price for the order in 44 (e.g. what the matching engine priced the peg order as initially).

For Spot ECN, customers can set ExecInst (18) to M to indicate a Peg-to-Mid order. In such case, the value of Tags 7002 and 211 will be ignored.

Peg orders cannot be modified via 35=G Order Cancel Replace Requests.

Peg orders are not supported for Cboe FX Central.

6.1.5 Term Currency Trading

For orders in term currencies (CCY2), clients will need to specify Currency (15) as CCY2. Setting 15=CCY2 changes the interpretation of quantities associated with the order (Quantity (38), MinQty (110), and MaxShow(210)) to be in CCY2 amounts.

The definition of Side (54) indicates whether the currency pair in question is being bought or sold and is disjoint from the value of the Currency (15).

Term currency trading is not supported on the NDF ECN.

6.1.6 NDF Settlement and Fixing Dates

Cboe FX performs validation of the SecurityID, SettleDate, and FixingDate submitted on a customer's New Order Single message. New Order Single messages containing SettleDate and FixingDate definitions which do not match Cboe FX static data are rejected. Prior to submitting a New Order Single message, customers should confirm the SecurityID, SettleDate, and FixingDate values are consistent in definition with the instrument they wish to trade.

6.2 Full Amount

A Full Amount taker order is a Limit IOC Order.

6.2.1 New Order Single - Full Amount – from Taker

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric field meant to contain 3rd-party account ID. This will be returned with any Execution- Report generated by this order. 20 character maximum.
35	MsgType	D	(Contained in header)
11	ClOrdID	Client Order ID (0 is not allowed)	Printable ASCII only. Cboe FX recommends customers use values that are unique within a trading day. \ |,single-quote, and double-quote characters cannot be used. ClOrdID is case sensitive, so the same case must be used to cancel an order.
21	HandlInst	1	Required by FIX 4.2 but not used. Example value 2.
15*	Currency		This represents the denomination of the quantity field. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000.
38	OrderQty		If Tag 15 is present: Qty of currency in Tag 15. Qty of currency 1 otherwise
44	Price	1.51234	See Data Types for Maximum Precision.
54	Side		1 = Buy 2 = Sell
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined by CCY1/CCY2. Example: *EUR/USD*.
40	OrdType		2 = Limit
59	TimeInForce		3 = Immediate Or Cancel
60*	TransactTime		Time Order was Initiated
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3

TAG	FieldName	Contents	Comments
			and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

6.2.2 Full Amount New Order Single – From Cboe FX to Maker

TAG	FieldName	Contents	Comments
11	ClOrdID		Unique Order Identifier
35	MsgType	D	(Contained in header)
526	SecondaryClOrdID		Same as Tag 131 from Quote Request msg.
64	SettlDate	YYYYMMDD	Value Date.
Component Block <Parties>			
453	NoPartyIDs	2	
>> 448†	PartyID	Cboe FX client identifier.	Case insensitive
>> 452†	PartyRole	1 = Executing Firm (Client Prime Broker) 3 = Client ID	
end Component Block <Parties>			
Component Block <Instrument>			
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined as CCY1/CCY2. Example: *EUR/USD*.
65	SymbolSfx	SPOT NDF	
end Component Block <Instrument>			
54	Side	1 = Buy 2 = Sell	Side always indicates the direction of CCY1 from Tag 55. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000. The side indicates the order direction from client's (not market maker's) perspective.
60	TransactTime		Time Order was Initiated
38	OrderQty		The order amount in the currency specified in Tag 15.

40	OrderType	D = Previously Quoted	
44	Price		Quoted price from Quote msg to deal on
15	Currency		Deal currency of the request. Can be CCY1 or CCY2 from Tag 55. Example: EUR
117	QuoteID		Same as Tag 117 from Quote msg of a quote this order is attempting to deal on. May be "unavailable" if an order is routed.
7000*	ConfirmDelay		Delay in milliseconds between the client selecting a quote and confirming the order. This Tag is only supplied if Tag 6999=1 in QuoteRequest message.
377*	SolicitedFlag	Y	'Y' when an order is routed to the market maker. Only present if the order has been routed.
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**
9030	UTI		Unique Trade Identifier. 40 characters: LEI (20 characters) + Unique Trade ID (20 characters) Cboe SEF LEI: 549300D84OQ6BDBRBO35 **Applies only to NDFs (Cboe SEF).**
9031	USI		Unique Swap Identifier. **Same value as UTI**. **Applies only to NDFs (Cboe SEF).**
9032	ReportingParty	Y = Yes N = No	Indicates if the execution report recipient is the reporting party. Follows ISDA FX Cash Rule. **Applies only to NDFs (Cboe SEF).**

7 Execution Report

7.1 Spot ECN, NDF ECN, & Cboe Central (Spot)

7.1.1 Execution Report – GENERIC EXECUTION REPORT

All possible fields that could be sent to the Client in an Execution Report. Not all fields are sent on all messages. Extra fields on all FIX messages should be ignored. The presence of fields beyond this API should not cause message rejects. New fields may be added to the API, and unnecessary fields may be removed from the API. For trades not initiated by the client, i.e. manual adjustment trades, Tag 11 will be set to 0.

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID.
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs. For trades not directly initiated by the client (manual adjustment trades, etc.) the field may be set to 0. For trades as a result from a quote, this field will be Tag 117 + L+ Tag 7225 + Side. See "5.1.1 Quote - From Client" for specs on Tag 117 and Tag 7225
17	ExecID	ECN Execution ID	The ExecID is indefinitely unique and is never reused consisting of alphanumeric characters
20	ExecTransType	Execution Report Type	0 = New 1 = Cancel (used to indicate cancel acknowledgements) 3 = Status
37	OrderID	ECN OrderId	Exchange Generated OrderID In response to a Cancel Request: ClOrdId of the order being cancelled, i.e. the same value as OrigClOrdID
39	OrdStatus	Current Order Status (FIX 4.4 usage)	0 = New 1 = Partially Filled 2 = Filled 3 = Average Trade 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected C = Expired (Deviation from FIX 4.4 - populated on IOC misses) E = Pending Replace
40	OrdType		See "6.1.1 New Order Single" for specs.

TAG	FieldName	Contents	Comments
41	OrigClOrdID	ClOrdId	In response to a Cancel Request: Original ClOrdID of the Initial Order. See "6.1.1 New Order Single" for specs, ClOrdID field.
38*	OrderQty		Order Quantity
44	Price/Rate		Limit Price specified
59	TimeInForce		See "6.1.1 New Order Single" for specs.
15*	Currency		Currency of Qty
54	Side		See "6.1.1 New Order Single" for specs.
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
76	ExecBroker	Y / N	Y - Indicates aggressive trade N - Indicates passive trade HSFX - otherwise
151	LeavesQty		0 for canceled, expired or rejected. Otherwise it is OrderQty-CumQty
14	CumQty		Total quantity filled in the order quantity currency.
110*	MinQty		See "6.1.1 New Order Single" for specs.
192	OrderQty2		Quantity in the opposite currency of order quantity.
64	FutSetlDate	YYYYMMDD	
75	TradeDate	YYYYMMDD	
119	SettlCurrAmount		Equivalent amount in USD
120	SettleCurrency	USD	Always in USD
210*	MaxShow		See "6.1.1 New Order Single" for specs.
150	ExecType	Execution Type (FIX 4.4 usage)	0 = New 3 = Average Trade 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected C = Expired (Deviation from FIX 4.4 - populated on IOC misses) E = Pending Replace F = Trade I = Status
6	AvgPx		Avg executed price (decimal portion has the same precision as Tag 31)
32*	LastShares	ExeQty	Executed quantity or Canceled quantity in the order quantity currency. For Execution Reports that are an

TAG	FieldName	Contents	Comments
			Order Cancel Response (39=4, 150=4), LastShares is always 0.
31	LastPx	ExePrice	Executed Price
382	NoContraBrokers	1,2	Value usually is 1, can occasionally be 2 to indicate an extra ContraBroker field
375	ContraBroker	Contra	Set to settlement code for those that are self-settling and Not Available otherwise. If this is a second ContraBroker field (only relevant if Tag 382 = 2), it contains a numeric representation of counterparty collateral id, and is used to indicate that the counterparty collateral is the same as the trading collateral.

58	Text		Reason from list below if Expired:
			lastlook decline
			    lastlook timeout
			    MinQty
			    LotSize
			    Insufficient PB credit
			    Insufficient Collat credit
			    price no longer available
			Source of counterparty liquidity from list below for an aggressive trade:
			    passive is lastlook
			    passive is firm
			If the trade matched at mid: matched at midpoint

60	TransactTime		Time Order was Initiated
211*	PegDifference	Price	Difference (signed) in units of currency CCY1 added to best price in market. Added to Best Offer on Peg Market Buys and Peg Primary Sells. Added to Best Bid on Peg Primary Buys and Peg Market Sells. Default value is 0.00.
167	SecurityType		FOR = Spot Instruments NDF = NDF Instruments
22	SecurityIDSource	8 = Exchange	**Applies only to NDFs (Cboe SEF).**
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**
9008	SettlMethod	1 = Physical 2 = Cash	**Applies only to NDFs (Cboe SEF).**
9009	PriceQuoteMethod	1 = Outright	**Applies only to NDFs (Cboe SEF).**
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9012	IsFirm	1 = Firm 2 = Last Look	**Applies only to NDFs (Cboe SEF).**
9020	FixingDate	UTC Date	YYYYMMDD fixing date of the instrument. **Applies only to NDFs (Cboe SEF).**

TAG	FieldName	Contents	Comments
9030	UTI		Unique Trade Identifier. 40 characters: LEI (20 characters) + Unique Trade ID (20 characters) Cboe SEF LEI: 549300D84OQ6BDBRBO35 **Applies only to NDFs (Cboe SEF).**
9031	USI		Unique Swap Identifier. Same value as UTI. **Applies only to NDFs (Cboe SEF).**
9039*	RTN	String	Report Transaction Number will be in the form of "CBOERTN" + UTI Prefix + UTI. Contact the FX Trade Desk to be configured to receive this field. Available November 29, 2023. **Applies only to NDFs (Cboe SEF).**
9032	ReportingParty	Y = Yes N = No	Indicates if the execution report recipient is the reporting party. Follows ISDA FX Cash Rule. **Applies only to NDFs (Cboe SEF).**

7.1.2 Execution Report – New Order or Cancel/Replace - From Cboe FX

Generated as a result of a New Order Placement or Cancel/Replace Request Placement.

TAG	FieldName	Contents	Comments
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
41	OrigClOrdID		
37	OrderID	ECN OrderId	See "7.1.1 Execution Report" for specs.
17	ExecID	"None"	See "7.1.1 Execution Report" for specs.
20	ExecTransType		0 = New
150	ExecType		0 = New 5 = Replaced 8 = Rejected C = Expired (Deviation from FIX 4.4 - populated on IOC misses) E = Pending Replace
39	OrdStatus	Current Order Status	0 = New 1 = Partially Filled 2 = Filled 5 = Replaced 8 = Rejected C = Expired (Deviation from FIX 4.4 - populated on IOC misses) D = Accepted for Bidding E = Pending Replace
40	OrdType		See "6.1.1 New Order Single" for specs.
119	SettlCurrAmount		Equivalent amount in USD
120	SettleCurrency	USD	Always in USD
192*	OrderQty2		See "7.1.1 Execution Report" for specs.

TAG	FieldName	Contents	Comments
15*	Currency		Currency of Tag #38
55	Symbol		See "6.1.1 New Order Single" for specs.
54	Side		See "6.1.1 New Order Single" for specs.
38*	OrderQty	Total	Order Quantity
210*	MaxShow		See "6.1.1 New Order Single" for specs.
110*	MinQty		See "6.1.1 New Order Single" for specs.
44	Price		Limit Price specified
59*	TimeInForce		See "7.1.1 Execution Report" for specs.
151	LeavesQty	Total	See "7.1.1 Execution Report" for specs.
14	CumQty		See "7.1.1 Execution Report" for specs.
6	AvgPx		Avg executed price (decimal portion has the same precision as Tag 31)
32*	LastShares	ExeQty	See "7.1.1 Execution Report" for specs.
31	LastPx	ExePrice	Executed Price
58*	Text		See "7.1.1 Execution Report" for specs.
60	TransactTime		GMT Date/Time of Execution
76*	ExecBroker		Y - Indicates aggressive trade N - Indicates passive trade HSFX - otherwise
211*	PegDifference	Price	Difference (signed) in units of currency CCY1 added to best price in market. Added to Best Offer on Peg Market Buys and Peg Primary Sells. Added to Best Bid on Peg Primary Buys and Peg Market Sells. Default value is 0.00.
167	SecurityType		FOR = Spot Instruments NDF = NDF Instruments
22	SecurityIDSource	8 = Exchange	**Applies only to NDFs (Cboe SEF).**
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**
9008	SettlMethod	1 = Physical 2 = Cash	**Applies only to NDFs (Cboe SEF).**
9009	PriceQuoteMethod	1 = Outright	**Applies only to NDFs (Cboe SEF).**
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9012	IsFirm	1 = Firm 2 = Last Look	**Applies only to NDFs (Cboe SEF).**

7.1.3 Execution Report – Filling Status From Cboe FX

TAG	FieldName	Contents	Comments
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs. For trades not directly initiated by the client (manual adjustment trades, etc.) the field may be set to 0. For trades as a result from a quote, this field will be Tag 117 + L+ Tag 7225 + Side. See "5.1.1 Quote - From Client" for specs on Tag 117 and Tag 7225
37	OrderID	ECN OrderId	See "7.1.1 Execution Report" for specs.
41*	OrigClOrdID	ClOrdID of Order	See "7.1.1 Execution Report" for specs.
17	ExecID	ECN Execution ID	See "7.1.1 Execution Report" for specs.
20	ExecTransType		0 = New
150	ExecType	Execution Type	0 = New 4 = Canceled 5 = Replace 6 = Pending Cancel 8 = Rejected C = Expired D = Accepted for Bidding E = Pending Replace F = Trade
39	OrdStatus	Current Order Status	1 = Partially Filled 2 = Filled 4 = Canceled 5 = Replaced C = Expired E = Pending Replace
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID. This will be returned with any ExecutionReport generated by this order.
55	Symbol		See "6.1.1 New Order Single" for specs.
54	Side		See "6.1.1 New Order Single" for specs.
64	FutSetlDate	YYYYMMDD	
75	TradeDate	YYYYMMDD	
76*	ExecBroker		Y - Indicates aggressive trade N - Indicates passive trade HSFX - otherwise
119*	SettlCurrAmount		Equivalent amount in USD
120*	SettlCurrency		Always in USD
38*	OrderQty	Total	Order Quantity
210*	MaxShow		See "6.1.1 New Order Single" for specs.

TAG	FieldName	Contents	Comments
110*	MinQty		See "6.1.1 New Order Single" for specs.
44	Price		Limit Price specified
59	TimeInForce		See "7.1.1 Execution Report" for specs.
126*	ExpireTime	GMT Date / Time of Order Expiration	See "7.1.1 Execution Report" for specs.
151	LeavesQty		See "7.1.1 Execution Report" for specs.
14	CumQty		See "7.1.1 Execution Report" for specs.
32*	LastShares		See "7.1.1 Execution Report" for specs.
15*	Currency		
6	AvgPx		Avg executed price (decimal portion has the same precision as Tag 31).
31	LastPx	0 or value	Last exec price
192	OrderQty2		Amount of contra currency
382	NoContraBrokers		See "7.1.1 Execution Report" for specs.
375	ContraBroker		See "7.1.1 Execution Report" for specs.
58	Text		See "7.1.1 Execution Report" for specs.
60	TransactTime		GMT Date/Time of Execution
211*	PegDifference	Price	Difference (signed) in units of currency CCY1 added to best price in market. Added to Best Offer on Peg Market Buys and Peg Primary Sells. Added to Best Bid on Peg Primary Buys and Peg Market Sells. Default value is 0.00.
167	SecurityType		FOR = Spot Instruments NDF = NDF Instruments
22	SecurityIDSource	8 = Exchange	**Applies only to NDFs (Cboe SEF).**
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**
9008	SettlMethod	1 = Physical 2 = Cash	**Applies only to NDFs (Cboe SEF).**
9009	PriceQuoteMethod	1 = Outright	**Applies only to NDFs (Cboe SEF).**
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9012	IsFirm	1 = Firm 2 = Last Look	**Applies only to NDFs (Cboe SEF).**
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**
9030	UTI		Unique Trade Identifier. 40 characters: LEI (20 characters) + Unique Trade ID (20 characters)

TAG	FieldName	Contents	Comments
			Cboe SEF LEI: 549300D84OQ6BDBRBO35 **Applies only to NDFs (Cboe SEF).**
9031	USI		Unique Swap Identifier. Same value as UTI. **Applies only to NDFs (Cboe SEF).**
9039*	RTN	String	Report Transaction Number will be in the form of "CBOERTN" + UTI Prefix + UTI. Contact the FX Trade Desk to be configured to receive this field. Available November 29, 2023. **Applies only to NDFs (Cboe SEF).**
9032	ReportingParty	Y = Yes N = No	Indicates if the execution report recipient is the reporting party. Follows GFMA FX reporting rules. **Applies only to NDFs (Cboe SEF).**

7.1.4 Execution Report – Order Status from Cboe FX

As a Result of Order Status Request

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID. This will be returned with any ExecutionReport generated by this order.
35	MsgType	8	(Contained in header)
11	ClOrdId	Client ID	See "6.1.1 New Order Single" for specs.
37	OrderID	ECN OrderId	See "7.1.1 Execution Report" for specs.
41*	OrigClOrdID	ClOrdID of Order	See "7.1.1 Execution Report" for specs.
17	ExecID	ECN Execution ID	See "7.1.1 Execution Report" for specs.
20	ExecTransType	3	Status
39	OrdStatus	Current Order Status	0 = New 1 = Partially Filled 6 = Pending Cancel E = Pending Replace
40	OrdType		See "6.1.1 New Order Single" for specs.
150	ExecType	Execution Type	I = Status
38*	OrderQty	Total	Order Quantity
210*	MaxShow		See "6.1.1 New Order Single" for specs.
110*	MinQty		See "6.1.1 New Order Single" for specs.
54	Side		See "6.1.1 New Order Single" for specs.
55	Symbol		See "6.1.1 New Order Single" for specs.
151	LeavesQty	Total	0 for canceled, expired, or rejected
14	CumQty	0	Quantity Filled
32*	LastShares	0	
15*	Currency		

TAG	FieldName	Contents	Comments
6	AvgPx	0	Avg executed price (decimal portion has the same precision as Tag 31).
31	LastPx	0 or value	Last exec price
44	Price		Limit Price specified
59	TimeInForce		See "7.1.1 Execution Report" for specs.
58	Text		See "7.1.1 Execution Report" for specs.
60	TransactTime		GMT Date/Time of Execution
211*	PegDifference	Price	Difference (signed) in units of currency CCY1 added to best price in market. Added to Best Offer on Peg Market Buys and Peg Primary Sells. Added to Best Bid on Peg Primary Buys and Peg Market Sells. Default value is 0.00.
167	SecurityType		FOR = Spot Instruments NDF = NDF Instruments
22	SecurityIDSource	8 = Exchange	**Applies only to NDFs (Cboe SEF).**
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**
9008	SettlMethod	1 = Physical 2 = Cash	**Applies only to NDFs (Cboe SEF).**
9009	PriceQuoteMethod	1 = Outright	**Applies only to NDFs (Cboe SEF).**
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**

7.2 Full Amount

7.2.1 Full Amount Execution Report (Trade, Reject) – From Both

TAG	FieldName	Contents	Comments
37	OrderID		OrderID is required to be unique for each chain of orders.
35	MsgType	8	(Contained in header)
526	SecondaryClOrdID		Same as Tag 131 from Quote Request msg.
11	ClOrdID		Same as Tag 11 from Order Single msg.
17	ExecID		Market Maker Trade ID. A string of printing ASCII characters. Must be unique. '/', single-quote, and double-quote characters cannot be used. Cannot exceed 20 characters.
150	ExecType	F =Trade 8 = Rejected	
39	OrdStatus	2 = Filled	

TAG	FieldName	Contents	Comments
		8 = Rejected	
Component Block \<Instrument\>			
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined as CCY1/CCY2. Example: *EUR/USD*.
end Component Block \<Instrument\>			
64	SettlDate	YYYYMMDD	Value date. Same as Tag 64 Tag from Order Single msg.
54	Side	1 = Buy 2 = Sell	Side always indicates the direction of CCY1 from Tag 55. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000. The side indicates the client's trade direction and must be the same as in Tag 54 of New Order Single msg.
15	Currency		Deal currency. Same as Tag 15 from Order Single msg.
38	OrderQty		The order amount in the currency specified in Tag 15.
40	OrdType	D = Previously Quoted	
44	Price		Same as Tag 44 from New Order Single msg.
6	AvgPx		Same as Tag 44.
14	CumQty		Same as Tag 38.
151	LeavesQty	0	Partial Full Amount trades are not supported.
6998*	ContraQty		Quantity of the other currency in the trade. For example, if 55=EUR/USD, 54 = 1, 15 = EUR, 38 = 1000000, 44 = 1.33080 then this Tag would be the USD quantity or 1330800, but if 15 = USD then this Tag would be the EUR quantity or 751427.71. This Tag is required when the Execution Report is for a trade (if Tag 150 = F)
58*	Text		Rejection reason if Tag 150 = 8
60*	TransactTime		Time of trade/rejection
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**

TAG	FieldName	Contents	Comments
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**
9030	UTI		Unique Trade Identifier. 40 characters: LEI (20 characters) + Unique Trade ID (20 characters) Cboe SEF LEI: 549300D84OQ6BDBRBO35 **Applies only to NDFs (Cboe SEF).**
9031	USI		Unique Swap Identifier. Same value as UTI. **Applies only to NDFs (Cboe SEF).**
9039*	RTN	String	Report Transaction Number will be in the form of "CBOERTN" + UTI Prefix + UTI. Contact the FX Trade Desk to be configured to receive this field. Available November 29, 2023. **Applies only to NDFs (Cboe SEF).**
9032	ReportingParty	Y = Yes N = No	Indicates if the execution report recipient is the reporting party. Follows ISDA FX Cash Rule. **Applies only to NDFs (Cboe SEF).**

7.2.2 Full Amount Execution Report (Timeout) – From Cboe FX

TAG	FieldName	Contents	Comments
37	OrderID		ClOrdID (Tag 11 in New Order Single) of the expired order
35	MsgType	8	(Contained in header)
526	SecondaryClOrdID		Same as Tag 131 from Quote Request msg.
11	ClOrdID		ClOrdID (Tag 11 in New Order Single) of the expired order
17	ExecID		ClOrdID (Tag 11 in New Order Single) of the expired order
150	ExecType	C = Expired	
39	OrdStatus	C = Expired	
Component Block <Instrument>			
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor Example: USDINR_1M **Applies only to NDFs (Cboe SEF).**
55	Symbol	String	The symbol is defined as CCY1/CCY2. Example: *EUR/USD*.
end Component Block <Instrument>			
64	SettlDate	YYYYMMDD	Value date. Same as Tag 64 Tag from New Order Single msg.

TAG	FieldName	Contents	Comments
54	Side	1 = Buy 2 = Sell	Side always indicates the direction of CCY1 from Tag 55. For example, to sell 1M USD against EUR: 55=EUR/USD, 54=1, 15=USD, 38=1000000. The side indicates the client's trade direction and must be the same as in Tag 54 of New Order Single msg.
15	Currency		Deal currency. Same as Tag 15 from Order Single msg.
38	OrderQty		The order amount in the currency specified in Tag 15.
40	OrdType	D = Previously Quoted	
44	Price		Same as Tag 44 from Order Single msg.
6	AvgPx		Same as Tag 44.
14	CumQty	0	
151	LeavesQty	0	
60	TransactTime		
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**
9020	FixingDate	UTC Date	YYYYMMDD fixing date of instrument. **Applies only to NDFs (Cboe SEF).**
9030	UTI		Unique Trade Identifier. 40 characters: LEI (20 characters) + Unique Trade ID (20 characters) Cboe SEF LEI: 549300D84OQ6BDBRBO35 **Applies only to NDFs (Cboe SEF).**
9031	USI		Unique Swap Identifier. Same value as UTI. **Applies only to NDFs (Cboe SEF).**
9039*	RTN	String	Report Transaction Number will be in the form of "CBOERTN" + UTI Prefix + UTI. Contact the FX Trade Desk to be configured to receive this field. Available November 29, 2023. **Applies only to NDFs (Cboe SEF).**
9032	ReportingParty	Y = Yes N = No	Indicates if the execution report recipient is the reporting party. Follows GFMA FX reporting rules. **Applies only to NDFs (Cboe SEF).**

8 Instrument Messages

8.1 NDF Security List Request Message – From Client

This message allows a client to request a list of valid instruments from Cboe SEF. This message may be sent at any time during an active market data session. To request multiple securities, clients must either set SecurityListRequestType=4 or send multiple SecurityListRequestMessages.

If SecurityListRequestType (559) = 0, then Symbol (55) must be specified and the resulting SecurityListMessage will contain all securities with the same underlying instrument. If SecurityID (48) is specified, only that security will be present in the resulting SecurityListMessage.

TAG	FieldName	Contents	Comments
35	MsgType	x	(Contained in header)
320	SecurityReqID	String	Unique request ID.
559	SecurityListRequestType	0 = Symbol 4 = All Securities	
55*	Symbol	String	Underlying instrument symbol in terms of CCY1/CCY2. Example: *USD/INR*. Required if SecurityListRequestType (559)
48*	SecurityID	String	Instrument, as CCY1CCY2_Tenor. Example: *USDINR_1M*

8.2 NDF Security List Message – From Server

This message contains all quotable instruments from Cboe SEF.

Note #1: While the session is active, Cboe SEF at any time may send an asynchronous Security List Message to update specific products. Cboe SEF will cancel all quotes of impacted instruments. **Clients should be able to handle asynchronous receipt of this message while their session is active.**

Note #2: Clients should validate the SecurityID, SettlDate, and FixingDate values returned in a Security List Message to ensure they are consistent with their definition of the product they wish to trade.

• An asynchronous security list message is triggered when we update the settlement or fixing date for an instrument intraday.

• An asynchronous security list message will only contain the instruments that have their fixing or settlement date updated. It does not contain all instruments.

• We do not add or remove instruments mid-day.

TAG	FieldName	Contents	Comments
35	MsgType	y	(Contained in header)
320	SecurityReqID	String	SecurityReqID sent by the client in Security List Request Message. **If the message is asynchronous from Cboe SEF, this Tag will not be populated.**
322	SecurityResponseID	String	Unique identifier of the Security List Message
560	SecurityRequestResult	Integer	0 = Valid Request 1 = Invalid Request 2 = No Instruments Matching 3 = Not Authorized 4 = Instrument Data Unavailable 5 = Request for Instrument Data Unsupported
393*	TotNoRelatedSym	Integer	Used to indicate the total number of securities being returned for this request. Used in the event message fragmentation is required.
9011	MarketProducts	Integer	3 = FX NDF
146	NoRelatedSym	Integer	Specifies the number of instruments being returned in this message. The instruments match the search parameters of the original Security List Request message.
>> 55†	Symbol	String	Underlying instrument symbol in terms of *CCY1/CCY2*. Example: *USD/INR*
>> 48†	SecurityID	String	Instrument, as *CCY1CCY2_Tenor*. Example: *USDINR_1M*.
>> 22†	SecurityIDSource	Integer	8 = Exchange
>> 167†	SecurityType	String	NDF
>> 2892†*	DerivativeUPICode	String	12 character field containing the UPI. Contact the FX Trade Desk to be configured to receive this field. Available November 29, 2023.
>> 15†	Currency	String	Currency of the Notional Amount.
>> 110†	MinQty	Qty	Minimum deal quantity for order size.
>> 64†	SettlDate	UTC Date	YYYYMMDD settlement date of instrument.
>> 969†	MinPriceIncrement	Price	Minimum tick size.
>> 120†*	SettlCurrency	String	Required if SettlMethod (9008) is Cash (2).
>> 9008†	SettlMethod	Integer	Settlement method. 1 = Physical 2 = Cash
>> 9009†	PriceQuoteMethod	Integer	1 = Outright

TAG	FieldName	Contents	Comments
>> 9010†	ProductComplex	Integer	3 = FX NDF
>> 9020†	FixingDate	UTC Date	YYYYMMDD fixing date of instrument.
>> 9021	FixingSource	String	Fixing Source.

8.3 Spot ECN Security List Request Message – From Client

This message allows a client to request a list of valid instruments from Cboe FX. This message may be sent at any time during an active market data session. To request multiple securities, clients must either set SecurityListRequestType=4 or send multiple SecurityListRequestMessages.

If SecurityListRequestType (559) = 0, then Symbol (55) must be specified and the resulting SecurityListMessage will contain all securities with the same underlying instrument.

TAG	FieldName	Contents	Comments
35	MsgType	x	(Contained in header)
320	SecurityReqID	String	Unique request ID.
559	SecurityListRequestType	0 = Symbol 4 = All Securities	
55*	Symbol	String	Underlying instrument symbol in terms of CCY1/CCY2. Example: *EUR/USD* Required if SecurityListRequestType (559)

8.4 Spot ECN Security List Message – From Server

This message contains all quotable instruments from Cboe FX.

Note #1: While the session is active, Cboe FX at any time may send an asynchronous Security List Message to update specific products. Cboe FX will cancel all quotes of impacted instruments. **Clients should be able to handle asynchronous receipt of this message while their session is active.**

Note #2: Clients should validate the SecurityID and SettlDate values returned in a Security List Message to ensure they are consistent with their definition of the product they wish to trade.

• An asynchronous security list message is triggered when we update the settlement date for an instrument intraday.

• An asynchronous security list message will only contain the instruments that have their settlement date updated. It does not contain all instruments.

• We do not add or remove instruments mid-day.

TAG	FieldName	Contents	Comments
35	MsgType	y	(Contained in header)
320	SecurityReqID	String	SecurityReqID sent by the client in Security List Request Message. **If the message is asynchronous from Cboe FX, this Tag will not be populated.**
322	SecurityResponseID	String	Unique identifier of the Security List Message
560	SecurityRequestResult	Integer	0 = Valid Request 1 = Invalid Request 2 = No Instruments Matching 3 = Not Authorized 4 = Instrument Data Unavailable 5 = Request for Instrument Data Unsupported
393*	TotNoRelatedSym	Integer	Used to indicate the total number of securities being returned for this request. Used in the event message fragmentation is required.
146	NoRelatedSym	Integer	Specifies the number of instruments being returned in this message. The instruments match the search parameters of the original Security List Request message.
>> 55†	Symbol	String	Underlying instrument symbol in terms of *CCY1/CCY2*. Example: EUR/USD
>> 22†	SecurityIDSource	Integer	8 = Exchange
>> 167†	SecurityType	String	SPOT
>> 15†	Currency	String	Currency of the Notional Amount.
>> 64†	SettlDate	UTC Date	YYYYMMDD settlement date of instrument.
>> 969†	MinPriceIncrement	Price	Minimum tick size.

9 Trade Confirmation

Since the FIX protocol (when sequence numbers and resend requests are used correctly) already guarantees the delivery of all trade messages to clients, by default the FIX Order Gateway automatically sends a trade acknowledgement to the Cboe FX ECN immediately after it sends a client an Execution Report for a trade.

However, as an extra protective feature, Cboe FX offers clients the option to generate this ECN acknowledgement themselves. Clients who want to confirm trades themselves must be configured by Cboe FX to do so. If not configured, all trades a client receives will be acknowledged automatically by the Cboe FX FIX Order Gateway.

In order to send trade confirmation messages manually, simply send the FIX Order Gateway an identical copy of the execution report it sent for each trade. This must be done within a short amount of time (please contact Cboe FX production support for the specific time amount).

9.1 Trade Confirmation Execution Report – To Client

Clients configured to make use of the "Trade Confirmation" functionality will receive ExecutionReports describing trades.

TAG	FieldName	Contents	Comments
1*	Account	3rd-party account ID	Free-text field meant to contain 3rd-party account ID. 20 character maximum.
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
17	ExecID	ECN Execution ID	"None" on an Execution Report for a new order. 20 character max length.
20	ExecTransType	Execution Report Type	0 = New
37	OrderID	ECN OrderId	Exchange Generated OrderID In response to a Cancel Request: ClOrdId of the order being cancelled, i.e. the same value as OrigClOrdID
39	OrdStatus	Current Order Status (FIX 4.4 usage)	1 = Partially Filled 2 = Filled
41	OrigClOrdID	ClOrdId	In response to a Cancel Request: Original ClOrdID of the Initial Order. See "6.1.1 New Order Single" for specs., ClOrdID field.
38*	OrderQty		Order Quantity
40	OrdType		2 = Limit F = Limit (same as '2')
44	Price/Rate		Limit Price specified
59	TimeInForce		See "6.1.1 New Order Single" for specs.
15*	Currency		Currency of Qty
54	Side		See "6.1.1 New Order Single" for specs.
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
76	ExecBroker	Y / N	Y - Indicates aggressive trade N - Indicates passive trade HSFX - otherwise
151	LeavesQty		0 for canceled, done for day, expired or rejected. Otherwise it is OrderQty-CumQty
14	CumQty		# of qty filled
110*	MinQty		See "6.1.1 New Order Single" for specs.
192	OrderQty2		Amount of contra currency
64	FutSetlDate	YYYYMMDD	
75	TradeDate	YYYYMMDD	

TAG	FieldName	Contents	Comments
119	SettlCurrAmount		Settlement amount
120	SettleCurrency	USD	
167	SecurityType	FOR	
210*	MaxShow		See "6.1.1 New Order Single" for specs.
150	ExecType	Execution Type FIX 4.4 usage)	F = Trade
6	AvgPx		Avg executed price
32*	LastShares	ExeQty	Executed CCY or Cancelled CCY
31	LastPx	ExePrice	Executed Price
382	NoContraBrokers	1	
375	ContraBroker	Contra	Set to settlement code for those that are self-settling and Not Available otherwise. If this is a second ContraBroker field (only relevant if Tag 382 = 2), it contains a numeric representation of counterparty collateral id, and is used to indicate that the counterparty collateral is the same as the trading collateral.
60	TransactTime		Time Order was Initiated

9.2 Trade Confirmation and Rejection – From Client

In order to indicate that you wish to accept a trade, send a copy of the ExecutionReport for the trade in question. In order to indicate that you wish to reject a trade, send a copy of the ExecutionReport for the trade in question with ExecType (150) set to Rejected (8).

TAG	FieldName	Contents	Comments
1*	Account	3rd-party account ID	Free-text field meant to contain 3rd-party account ID. 20 character maximum.
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
17	ExecID	ECN Execution ID	"None" on an Execution Report for a new order. 20 character max length.
20	ExecTransType	Execution Report Type	0 = New
37	OrderID	ECN OrderId	Exchange Generated OrderID In response to a Cancel Request: ClOrdId of the order being cancelled, i.e. the same value as OrigClOrdID
39	OrdStatus	Current Order Status (FIX 4.4 usage)	1 = Partially Filled 2 = Filled
41	OrigClOrdID	ClOrdId	In response to a Cancel Request: Original ClOrdID of the Initial Order. See "6.1.1 New Order Single" for specs., ClOrdID field.

TAG	FieldName	Contents	Comments
38*	OrderQty		Order Quantity
40	OrdType		2 = Limit F = Limit (same as '2')
44	Price/Rate		Limit Price specified
59	TimeInForce		See "6.1.1 New Order Single" for specs.
15*	Currency		Currency of Qty
54	Side		See "6.1.1 New Order Single" for specs.
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
76	ExecBroker	Y / N	Y - Indicates aggressive trade N - Indicates passive trade HSFX - otherwise
151	LeavesQty		0 for canceled, done for day, expired or rejected. Otherwise it is OrderQty-CumQty
14	CumQty		# of qty filled
110*	MinQty		See "6.1.1 New Order Single" for specs.
192	OrderQty2		Amount of contra currency
64	FutSetlDate	YYYYMMDD	
75	TradeDate	YYYYMMDD	
119	SettlCurrAmount		Settlement amount
120	SettleCurrency	USD	
167	SecurityType	FOR	
210*	MaxShow		See "6.1.1 New Order Single" for specs.
150	ExecType	Execution Type FIX 4.4 usage)	8 = Rejected F = Trade
6	AvgPx		Avg executed price
32*	LastShares	ExeQty	Executed CCY or Cancelled CCY
31	LastPx	ExePrice	Executed Price
382	NoContraBrokers	1	
375	ContraBroker	Contra	Set to settlement code for those that are self-settling and Not Available otherwise. If this is a second ContraBroker field (only relevant if Tag 382 = 2), it contains a numeric representation of counterparty collateral id, and is used to indicate that the counterparty collateral is the same as the trading collateral.
60	TransactTime		Time order was initiated.

9.3 Trade Final Status – To Client

Sessions can be configured to receive the final status of a trade as known by Cboe FX. This message will simply be a copy of the trade information with the CboeFXTradeStatus (Tag 7226) populated. Sessions configured for the functionality will only receive Final State messages when they are the passive party to a trade.

TAG	FieldName	Contents	Comments
1*	Account	3rd-party account ID	Free-text field meant to contain 3rd-party account ID. 20 character maximum.
35	MsgType	8	(Contained in header)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
17	ExecID	ECN Execution ID	"None" on an Execution Report for a new order. 20 char max len
20	ExecTransType	Execution Report Type	0 = New
37	OrderID	ECN OrderId	Exchange Generated OrderID In response to a Cancel Request: ClOrdId of the order being cancelled, i.e. the same value as OrigClOrdID
39	OrdStatus	Current Order Status (FIX 4.4 usage)	1 = Partially Filled 2 = Filled
41	OrigClOrdID	ClOrdId	In response to a Cancel Request: Original ClOrdID of the Initial Order. See "6.1.1 New Order Single" for specs., ClOrdID field.
38*	OrderQty		Order Quantity
40	OrdType		2 = Limit F = Limit (same as '2')
44	Price/Rate		Limit Price specified
59	TimeInForce		See "6.1.1 New Order Single" for specs.
15*	Currency		Currency of Qty
54	Side		See "6.1.1 New Order Single" for specs.
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
76	ExecBroker	N	N = Passive Trade
151	LeavesQty		0 for canceled, done for day, expired, or rejected. Otherwise it is OrderQty-CumQty
14	CumQty		# of qty filled
110*	MinQty		See "6.1.1 New Order Single" for specs.
192	OrderQty2		Amount of contra currency
64	FutSetlDate	YYYYMMDD	
75	TradeDate	YYYYMMDD	
119	SettlCurrAmount		Settlement amount
120	SettleCurrency	USD	
167	SecurityType	FOR	
210*	MaxShow		See "6.1.1 New Order Single" for specs.
150	ExecType	Execution Type FIX 4.4 usage)	F = Trade
6	AvgPx		Avg executed price
32*	LastShares	ExeQty	Executed CCY or Cancelled CCY

TAG	FieldName	Contents	Comments
31	LastPx	ExePrice	Executed Price
382	NoContraBrokers	1, 2	Value usually is 1, can occasionally be 2 to indicate an extra ContraBroker field
375	ContraBroker	Contra	Set to settlement code for those that are self-settling and Not Available otherwise. If this is a second ContraBroker field (only relevant if Tag 382 = 2), it contains a numeric representation of counterparty collateral id, and is used to indicate that the counterparty collateral is the same as the trading collateral.
60	TransactTime		Time Order was Initiated
7226	CboeFXTradeStatus	1 - client accepted with no error 2 - client declined 3 - ECN expired the trade 4 - error in client acceptance	Presence of this field indicates a "Trade Final Status" message.

10 Averaging Trades Request

10.1 Averaging Trades Request – From Client

TAG	FieldName	Contents	Comments
35	MsgType	D	(Contained in header)
11	ClOrdID	Client ID	Client Order ID. Alphanumeric only. Cboe FX recommends customers use values that are unique within a trading day. Validation is case insensitive, so reusing an ID differing in case only will cause a rejection. ClOrdID is case sensitive, so the same case must be used to cancel an order.
21	HandlInst	1	Required by FIX 4.2 but not used.
38	OrderQty	0	Required by FIX 4.2 but not used.
40	OrderType	1	Required by FIX 4.2 but not used.
44	Price	0	Required by FIX 4.2 but not used.
54	Side		1 - buy or 2 - sell
55	Symbol	String	The symbol is defined by CCY1/CCY2. Example: *EUR/USD*.
59	TimeInForce	0	0 = Day, Good through normal Market Hours
60	TransactTime	UTC	Time when the Order was Initiated
820	TradeLinkIDs	String	Array of trade IDs to be averaged. Comma separated. Example value:'66284,66278,66274' or 'TRD_66284,TRD_66278,TRD_66274' The original Trade ID is reported in Tag 17 (ExecID).

10.2 Averaging Execution Report – From Cboe FX

10.2.1 Averaging Trades Request Acknowledgement

TAG	FieldName	Contents	Comments
35	MsgType	8	(Contained in header)
6	AvgPx	0	
11	ClOrdID	Client orderId	See "6.1.1 New Order Single" for specs.
14	CumQty	0	
17	ExecID		The Average ID. Example values: '64979a' for multiple average or '64979' for single average
20	ExecTransType	0	0 = New
37	OrderID	ECN OrderId	The Average ID.

TAG	FieldName	Contents	Comments
			Example values: '64979a' for multiple average or '64979' for single average
39	OrdStatus	0	0 = New
54	Side		1 - buy or 2 - sell
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
58	Text	String	"Averaging request received"
59	TimeInForce	0	See "7.1.1 Execution Report" for specs.
60	TransactTime	UTC	Time when the Order was Initiated
76	ExecBroker	String	HSFX
150	ExecType	0	0 = New
151	LeavesQty	0	Required by FIX 4.2 but not used.
167	SecurityType	String	FOR
192	OrderQty2	0	
820	TradeLinkIDs	String	Array of trade IDs to be averaged. Comma separator. Example value: '66284,66278,66274' or 'TRD_66284,TRD_66278,TRD_66274' The original Trade ID is reported in Tag 17 (ExecID).

10.2.2 Averaging Trades Request Reject

TAG	FieldName	Contents	Comments
35	MsgType	8	(Contained in header)
6	AvgPx	0	
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
14	CumQty	0	
17	ExecID		The Average ID. Example values: '64979a' for multiple average or '64979' for single average
20	ExecTransType	0	0 = New
37	OrderID	ECN OrderId	The Average ID. Example values: '64979a' for multiple average or '64979' for single average
39	OrdStatus	8	8 = Rejected
54	Side		1 - buy or 2 - sell
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
58	Text	String	Reason for rejection
59	TimeInForce	0	See "7.1.1 Execution Report" for specs.
60	TransactTime	UTC	Time when the Order was Initiated

TAG	FieldName	Contents	Comments
76	ExecBroker	HSFX	
150	ExecType	8	8 = Rejected
151	LeavesQty	0	Required by FIX 4.2 but not used.
167	SecurityType	String	FOR
192	OrderQty2	0	
820	TradeLinkIDs	String	Array of trade IDs to be averaged. Comma separator. Example value: '66284,66278,66274' or 'TRD_66284, TRD_66278, TRD_66274' The original Trade ID is reported in Tag 17 (ExecID).

10.2.3 Averaging Trades Response

TAG	FieldName	Contents	Comments
35	MsgType	8	(Contained in header)
6	AvgPx	1.23456	Average Price (considered to be accurate)
11	ClOrdID	Client ID	See "6.1.1 New Order Single" for specs.
14	CumQty		Total quantity of the deal currency
17	ExecID		The Average ID. Example values: '64979a' for multiple average or '64979' for single average
20	ExecTransType	0	0 = New
37	OrderID	ECN OrderId	The Average ID. Example values: '64979a' for multiple average or '64979' for single average
39	OrdStatus	3	3 = Done For Day
54	Side		1 - buy or 2 - sell
55	Symbol	CCY1/CCY2	See "6.1.1 New Order Single" for specs.
58	Text	String	average request was processed successfully
59	TimeInForce	0	See "7.1.1 Execution Report" for specs.
60	TransactTime	UTC	Time when the Order was Initiated
76	ExecBroker	HSFX	
150	ExecType	3	3 = Done For Day
151	LeavesQty	0	Required by FIX 4.2 but not used.
167	SecurityType	String	FOR
192	OrderQty2		Total quantity of the counter currency
820	TradeLinkIDs	String	Array of trade IDs to be averaged. Comma separator. Example value: '66284,66278,66274' or 'TRD_66284,TRD_66278,TRD_66274' The original Trade ID is reported in Tag 17 (ExecID).

11 Spot ECN, NDF ECN, & Cboe Central (Spot) Order Cancel Messages

The Cboe FX FIX Gateway supports mass order cancellation requests. The two rules for mass cancel requests are as follows:

- To cancel all orders for all instruments for a trader. You need to set Tags 41=0 and 55=CANCEL.

- To cancel all orders for a single instrument for a trader. You need to set Tags 41=0 and 55=CCY1/CCY2. **If trading NDFs, Tag 48 = SecurityID should also be included.**

11.1 Order Cancel – From Client

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID. This will be returned with any ExecutionReport generated by this request.
35	MsgType	F	
11	ClOrdID	Client ID	Client Order ID of the Cancel Request. Cboe FX recommends customers use values that are unique within a trading day.
41	OrigClOrdID		Original Client Order ID of the Initial Order. Cboe FX recommends customers use values that are unique within a trading day.
55	Symbol		Required for Confirmation. Must match the original order. See "6.1.1 New Order Single" for specs.
54*	Side		See "6.1.1 New Order Single" for specs.
60*	TransactTime		GMT Date/Time Order was initiated
15*	Currency		
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

11.2 Order Cancel Replace Request – From Client

Order Cancel Replace Request is used to change parameters of a pre-existing order. The three parameters which can currently be changed are OrderQty, Price, and MaxShow.

Note that an OrderCancelReject message sent in response to an OrderCancelReplaceRequest does not indicate that the original order is cancelled, only that the attempted replacement was rejected. If the original order is cancelled as a side-effect of a cancel-replace rejection, an unsolicited cancel notification in the form of an ExecutionReport will be sent as well.

Cboe NDF Note: A Cancel Order should only be sent upon completion of a Cancel Replace Request. A Cancel Order attempted while a Cancel Replace Request is in flight will be rejected.

Cboe Central Note: Order Cancel Replace messages are unsupported on Cboe Central.

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID. This will be returned with any ExecutionReport generated by this request.
35	MsgType	G	
11	ClOrdID	ClientID	See "11.1 Order Cancel" for specs. for specs.
41	OrigClOrdID		See "11.1 Order Cancel" for specs. for specs.
21	HandlInst	1	
38	OrderQty	Qty	Total Order Quantity desired, including the part already executed.
210*	MaxShow		If not supplied, MaxShow specified by a previous New Order Single or Order Cancel Replace Request is assumed.
110*	MinQty		Minimum trade quantity. Must be at most the OrderQty. If the OrderQty drops below this quantity due to a fil, the order will be automatically cancelled. If not supplied, MinQty specified by a previous New Order Single or Order Cancel Replace Request is assumed.
44	Price	Price	New Limit Price.
55*	Symbol		See "6.1.1 New Order Single" for specs.
40*	OrdType		See "6.1.1 New Order Single" for specs.
54*	Side		
60*	TransactTime		GMT Date/Time Order was initiated
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor.

TAG	FieldName	Contents	Comments
			Applies only to NDFs (Cboe SEF).
25004	OEOID	String	Identifies the Order Entry Operator responsible for this message. Minimum and maximum length of the field is 3 and 18 characters, respectively. Characters in ASCII range 33-126 are allowed, except for comma, semicolon, and pipe. **Note**: this will be required effective December 15, 2023. As of this date, messages not including this Tag will be rejected. **Applies only to NDFs (Cboe SEF).**

11.3 Order Cancel Reject – From Cboe FX

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID.
35	MsgType	9	
11	ClOrdID		See "11.1 Order Cancel" for specs.
37	OrderID	ECN OrderId	Exchange Generated OrderID In response to a Cancel Request: OrderId of the original order 20 chars maximum length.
41	OrigClOrdID		See "11.1 Order Cancel" for specs.
55	Symbol		See "6.1.1 New Order Single" for specs.
434	CxlRejResponseTo	Reject Response to	1 = Order Cancel Request 2 = Order Cancel/Replace Request
102*	CxlRejReason	Predefined Reason	0 = Too Late 1 = Unknown Order 3 = Order Already in Pending Cancel or Pending Replace Status 6 = Duplicate ClOrdID Received 99 = Other
39*	OrdStatus		1 = Partially Filled 2 = Filled 4 = Canceled A = Pending New, Early Cancel
58*	Text	String	Textual description
60*	TransactTime		GMT Date/Time Order was canceled
22	SecurityIDSource	8 = Exchange	**Applies only to NDFs (Cboe SEF).**
48	SecurityID	String	Instrument, as CCY1CCY2_Tenor. **Applies only to NDFs (Cboe SEF).**

TAG	FieldName	Contents	Comments
9010	ProductComplex	3 = FX NDF	**Applies only to NDFs (Cboe SEF).**

12 Informative Messages

12.1 Order Status Request – From Client

An Order Status Request may be used to query the status of an active order.

Customers should note that an Order Status Request cannot be used to query the status of an order from a prior session. For more information on how orders are treated after a disconnect please see *Automatic Cancel on Disconnect* in *Section 1.8*.

TAG	FieldName	Contents	Comments
1*	Account	Alphanumeric characters and underscores	Alphanumeric text field meant to contain 3rd-party account ID
35	MsgType	H	(Contained in header)
11	ClOrdID		See "6.1.1 New Order Single" for specs.
55*	Symbol		See "6.1.1 New Order Single" for specs.
54*	Side		1 = Buy 2 = Sell
60*	TransactTime		GMT Time Status Request was initiated

13 Operational Sequence

13.1 Logon Process

1. The client establishes a TCP connection to Cboe FX on specified TCP port

2. The client should send a FIX-Login Message that includes their Company/CollatId in the SenderCompID field, HSFX in the TargetCompID field, Login/userId in the SenderSubID and Username fields, their password in the Password field.

3. Cboe FX will Respond immediately with a confirming Login Message if the client Authenticates. If the Client fails to Authenticate a Logout Message will be sent with a Text field indicating the Reason the Client was rejected and the Connection will be terminated immediately by Cboe FX. Cboe FX will Reject Incoming Logins with MsgSeqNum less than expected: This means that if there had been a previously established and terminated FIX connection and the client tries to re-establish a connection, it must do so with a MsgSeqNum > than the last MsgSeqNum that it had sent out.

   (Sequence Numbers return to 1 at the start of each day.)

4. At this point both the Client and server should synchronize, if necessary. If the MsgSeqNum of the Logon Message was greater than expected, Cboe FX will send a Sequence Resend Request for the missed messages. The Client should never resend old messages. If the Client Sends a Resend Request, their request is processed by Cboe FX.

5. Cboe FX will send any executions that occurred while the client was not connected to the system.

   (This will occur as soon as a heartbeat with the generated TestReqID is received)

13.2 Regular FIX Communications

Whenever a message cannot be understood a Reject Message is sent with a description of the problem in the Text Field. (I.e. Invalid Checksum or Missing Field) Notes about Gap Fills:

> Whenever a gap is detected Cboe FX will disregard the most recently received message and issue a Resend Request from the MsgSeqNum Cboe FX was expecting to infinity (0 in FIX 4.2). The Client is advised not to resend old messages, but use a Gap Fill instead. When Cboe FX receives a ResendRequest, it processes the requests and sends the response all at once.

Notes about StatusRequest Responses:

> The Result of Issuing a status request for any filled or partially filled order will be a retransmission a single execution report. If the order has not been traded and has been canceled, it will return unknown in Tag 55 and no such order or trade for [ClientOrderID] in Tag 58.

13.3 Logout Process

A client that wishes to terminate their FIX connection should send a Logout message to Cboe FX. Cboe FX will try to cancel all pending orders then close the TCP connection. Cboe FX will not send a logout confirmation to the client.

13.4 Cancel / Replace Logic

OrderQty in a C/R request should be the total quantity desired on the order including any previously executed quantity. The OrderQty or the Price is required on all Cancel Replace requests.

The response to a C/R request is a Pending Replace Execution Report with ExecType=PendingReplace and OrdStatus=PendingReplace. The Pending Replace Execution Report will have all the order information from the original order, including Price, OrderQty, LastShares, and CumQty. Once the order is replaced, a Replacement Execution Report will be sent with the replacement information taking into account the already executed quantity. If the OrderQty <= CumQty, the CumQty is used on the Execution Reports returning to the client, with OrdStatus = Filled, ExecType = Replace.

If an execution is pending when a C/R request is received and the original order is filled the C/R request will be rejected (Tag #39=8) with CumQty and OrderQty equal to the executed quantity if this is greater than the C/R request quantity.

14 FIX Conversation Examples

All of the following conversations are for a single user/connection setup. As noted above, the only difference in a multiple-user/connection setup would be that Tag 116 would contain the trader's userid.

Key:

"**<<**" means client sends the following message

"**>>**" means client receives the following message

14.1 Login

<< 8=FIX.4.2 9=106 35=A 34=1 49=U1par 50=U1fix 52=20090206-21:13:36.887
56=FixServer 98=0 108=30 141=Y 553=U1fix 554=hotspot 10=061

>> 8=FIX.4.2 9=84 35=A 34=1 49=FixServer 52=2009020621:13:37.293
56=U1par 57=U1fix 98=0 108=30 141=Y 10=087

14.2 Logoff

<< 8=FIX.4.2 9=102 35=5 34=861 49=U1par
56=HSFX-FIX-BRIDGE 52=20090209-14:20:41.234 50=U1fix 369=880 58=Shutdown request 10=192

>> 8=FIX.4.2 9=74 35=5 34=880
49=HSFX-FIX-BRIDGE 52=20090209-14:20:41.247 56=U1par 57=U1fix 10=244

14.3 NewOrderSingle

<< 8=FIX.4.2 9=138 35=D 34=2 49=U1par 50=U1fix 52=20090206-21:13:59.324
56=FixServer 11=1233954839232 15=EUR 21=1 38=10000 40=F 44=1.25 54=1 55=EUR/USD 59=0 10=054

>> 8=FIX.4.2 9=302 35=8 34=2 49=FixServer 52=20090206-21:13:59.356
56=U1par 57=U1fix 6=0 11=1233954839232 14=0 15=EUR 17=1630 09101_REQID_ACK_302 20=0 31=0
32=0 37=163009101 38=10000 39=D 44=1.25 54=1 55=EUR/USD 58=bid/offer request was processed
successfully 59=0 60=20090206-21:13:59.356 76=HSFX 150=0 151=10000 167=FOR 10=067

14.4 OrderCancelRequest

<< 8=FIX.4.2 9=145 35=F 34=4 49=U1par 50=U1fix 52=20090206-21:14:17.590 56=FixServer
11=1233954857593 38=10000 41=1233954851045 55=EUR/USD 60=20090206-21:14:17.590 10=241

>> 8=FIX.4.2 9=281 35=8 34=5 49=FixServer 52=20090206-21:14:17.606 56=U1par 57=U1fix
6=0 11=1233954857593 14=0 15=EUR 17=1233 954857593_ClOrdID_C_ER_6 20=0 32=0
37=1233954857593 38=0 39=6 41=1233954851045 54=1 55=EUR/USD 58=cancel pending 59=0
60=2009020621:14:17.606 76=HSFX 150=6 151=10000 167=FOR 10=141

>> 8=FIX.4.2 9=332 35=8 34=6 49=FixServer 52=20090206-21:14:17.637 56=U1par 57=U1fix
6=0 11=1233954851045 14=0 15=EUR 17=163009102_REQID_C_302 20=1 31=0 32=0 37=163009102
38=10000 39=4 44=1.2500554=1 55=EUR/USD 58=cancel request was processed successfully
59=0 60=20090206-21:14:17.637 64=20081125 76=HSFX 119=0 120=USD 150=4 151=10000 167=FOR 192=0
10=065

14.5 OrderCancelReplaceRequest

<< 8=FIX.4.2 9=176 35=G 34=3 49=U1par 50=U1fix 52=20090206-21:14:11.043   56=FixServer
11=1233954851045 21=1 38=10000 40=F 41=1233954839232 44=1.25005 54=1 55=EUR/USD 59=0
60=20090206-21:14:11.043 10=064

>> 8=FIX.4.2 9=295 35=8 34=3 49=FixServer 52=20090206-21:14:11.074 56=U1par 57=U1fix
6=0   11=1233954851045   14=0   15=EUR   17=1233   954851045_ClOrdID_CR_ER_E   20=0 32=0
37=1233954851045 38=10000 39=E 41=1233954839232 44=1.25 54=1 55=EUR/USD   58=replace pending
59=0 60=20090206-21:14:11.074 76=HSFX 150=E 151=10000 167=FOR   10=126

>> 8=FIX.4.2 9=324 35=8 34=4 49=FixServer 52=20090206-21:14:11.106 56=U1par 57=U1fix
6=0 11=1233954851045 14=0 15=EUR 17=1630 09102_REQID_CR_1 20=0 31=0 32=0 37=163009102
38=10000 39=0 41=123395483 9232 44=1.25005 54=1 55=EUR/USD 58=Cancel/Replace request was
processed successfully 59=0 60=20090206-21:14:11.106 76=HSFX 150=5 151=10000 167=FOR 10=021

14.6 OrderStatusRequest

<< 8=FIX.4.2 9=102 35=H 34=16 49=U1par 52=2009020621:40:06.767
56=FixServer 11=ORD0822115 54=1 60=2009020621:40:06.767 10=114

>> 8=FIX.4.2 9=294 35=8 34=21 49=FixServer 52=20090206-21:40:06.767
56=U1par57=U1fix 6=0   11=ORD0822115 14=0 15=EUR 17=0 20=3 31=0 32=0 37=1630010120
38=1000000
39=4 44=1.56445 54=2 55=EUR/USD 58=s tatus of order ORD0822115 59=0 60=2009020621:40:06.767
64=20081125 76=HSFX 119=0 120=USD 150=I 151=0 167=FOR 192= 0 10=030

14.7 Averaging Trades Request

<< 8=FIX.4.2 9=602 35=D 49=U1par 50=U1fix 56=HSFX-FIXBRIDGE 34=4443 52=20090209-17:03:41
115=47758 11=200902081000000Y 21=3 55=EUR/USD 54=1 38=0 210=0 60=20090209-17:03:41
40=F 44=0 59=0 820=TRD_14696320,TRD_14696346,TRD_14696376,TRD_14696380,TRD_14696406,
TRD_14696440,TRD_14696462,TRD_14696474,TRD_146964
84,TRD_14696490,TRD_14696542,TRD_14696546,
TRD_14696548,TRD_14696566,TRD_14696592,TRD_14696596,TRD_14696622,TRD_14696628,TRD_1469
6
670,
TRD_14696672,TRD_14696688,TRD_14696690,TRD_14696700,TRD_14696714,TRD_14696758,TRD_1469
6
776,
TRD_14696806,TRD_14696814,TRD_14696830,TRD_14696902,TRD_14696916,TRD_14696954,TRD_1469
6 984 10=062

>> 8=FIX.4.2 9=683 35=8 34=4494 49=HSFX-FIX-BRIDGE 52=2009020917:03:40.983 56=U1par 57=U1fix
6=0 11=200902081000000Y 14=0 17=14696320 a 20=0 37=14696320a 39=0 54=1 55=EUR/USD
58=Averaging
request received 59=0 60=20090209-17:03:40.983 76=HSFX 150=0 151=0 167=FOR 192=0
820=TRD_14696320,

TRD_14696346,TRD_14696376,TRD_14696380,TRD_14696406,TRD_14696440,TRD_14696462,TRD_1469
6
474,
TRD_14696484,TRD_14696490,TRD_14696542,TRD_14696546,TRD_14696548,TRD_14696566,TRD_1469
6
592,
TRD_14696596,TRD_14696622,TRD_14696628,TRD_14696670,TRD_14696672,TRD_14696688,TRD_1469
6 690,
TRD_14696700,TRD_14696714,TRD_14696758,TRD_14696776,TRD_14696806,TRD_14696814,TRD_1469
6 830, TRD_14696902,TRD_14696916,TRD_14696954,TRD_1469698410=139

>> 8=FIX.4.2 9=725 35=8 34=4495 49=HSFX-FIX-BRIDGE 52=2009020917:03:41.561 56=U1par 57=U1fix
6=1.3064719231 11=200902081000000Y 14=26 000000 17=14696320a 20=0 37=14696320a 39=3 54=1
55=EUR/USD 58=average request was processed successfully. 59=0 60=20090209-17:03:41.561
76=HSFX 150=3 151=0 167=FOR 192=33968270
820=TRD_14696320,TRD_14696346,TRD_14696376,TRD_14696380,
TRD_14696406,TRD_14696440,TRD_14696462,TRD_14696474,TRD_14696484,TRD_14696490,TRD_1
4696542,
TRD_14696546,TRD_14696548,TRD_14696566,TRD_14696592,TRD_14696596,TRD_14696622,TRD_1
4696628,
TRD_14696670,TRD_14696672,TRD_14696688,TRD_14696690,TRD_14696700,TRD_14696714,TRD_1
4696758,
TRD_14696776,TRD_14696806,TRD_14696814,TRD_14696830,TRD_14696902,TRD_14696916,TRD_1
4696954, TRD_14696984 10=040

j
14.8 Trade

<< 8=FIX.4.2 9=351 35=8 34=171550 49=HSFX-FIX-BRIDGE 52=2009020915:46:09.648 56=U1par 57=U1fix
6=1.30695 11=h69RZE 14=306027 15=EUR 17=TRD_14695554 20=0 31=1.30695 32=306027
37=4923456801
38=306027 39=2 44= 1.30695 54=1 55=EUR/USD 59=3 60=20090209-15:46:09.648 64=20090211
75=20090209
76=Y 119=399961.99 120=USD 150=F 151=0 167=FOR 192=399961.99 382=1 375=Not Available
10=235

15 Full Amount Examples

15.1 Trade

In case of a successful trade, Cboe FX will respond with a copy of the ExecutionReport for the trade in question.
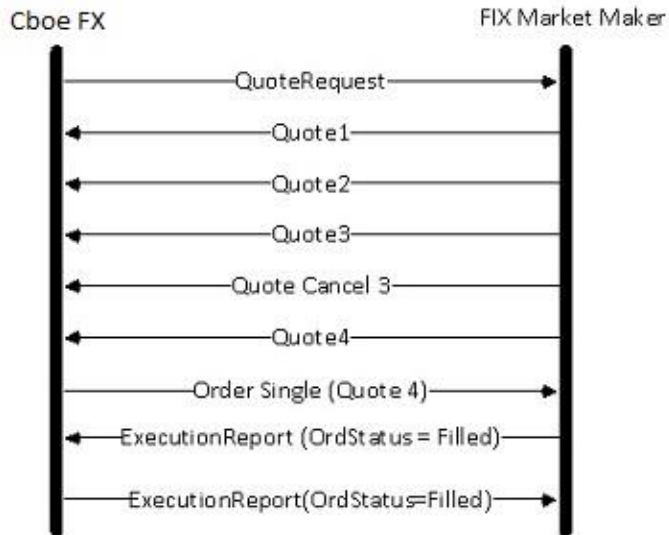

15.2 Full Amount Order Rejection

The market maker can reject a client's order if, for example, the client is attempting to deal on a stale quote. The market maker may continue streaming quotes after the order rejection. The client may cancel the quote stream (15.4.1) or submit another order on a quote (15.4.2) following an order rejection.

15.2.1 Order Rejection and Cancel
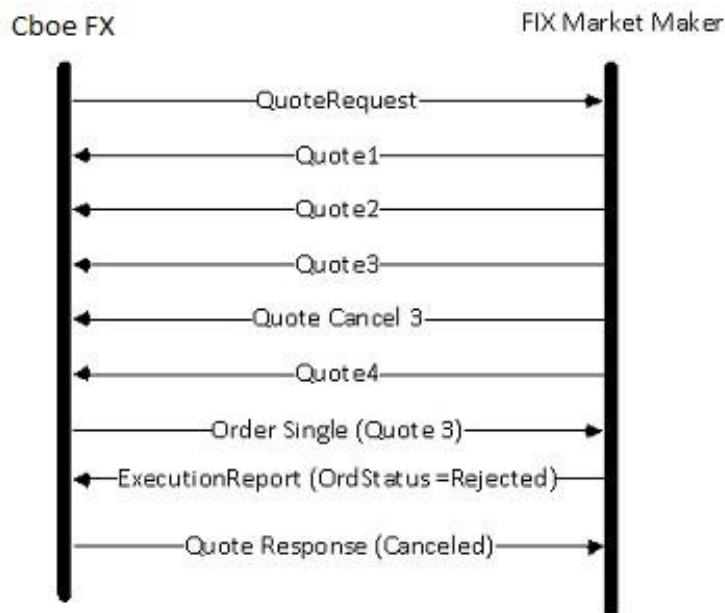
15.2.2 Order Rejection and Retry
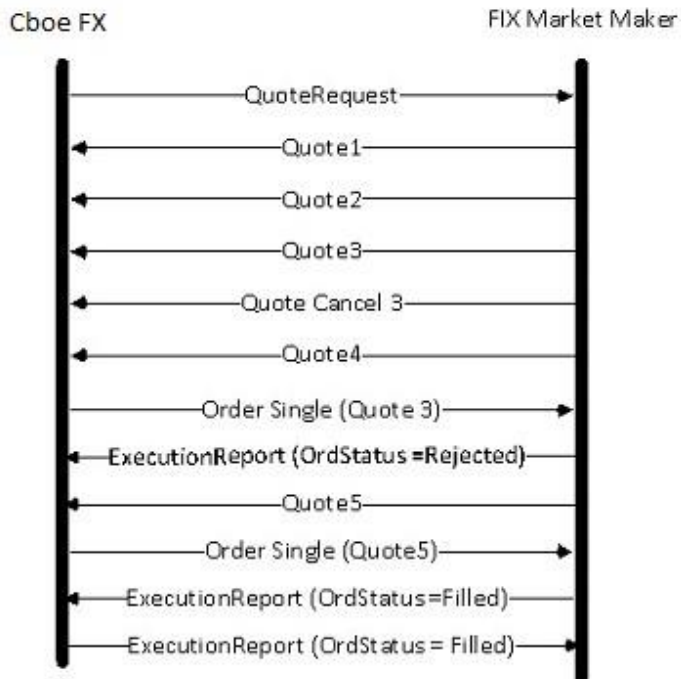
15.3 Trade Rejection

Cboe FX may reject a trade if the trade can't be booked or if it fails validation checks. The Market maker
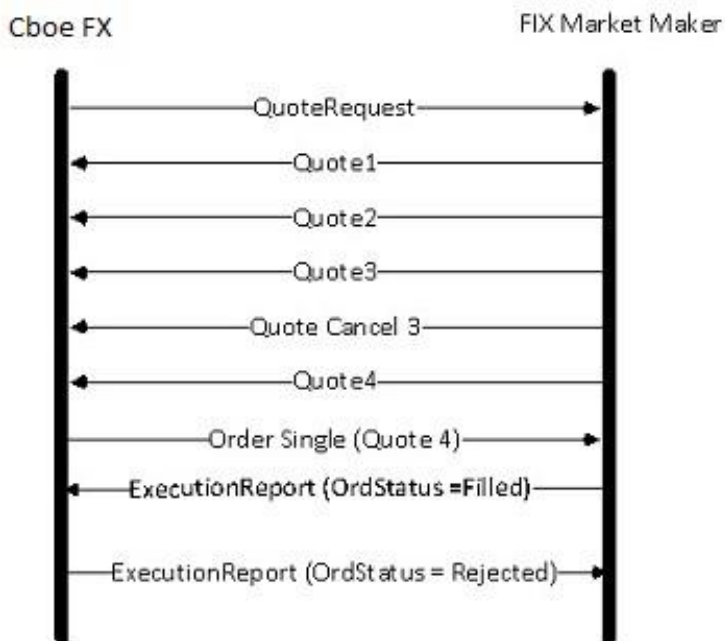
is then expected to cancel the trade. In order to indicate a rejected trade, Cboe FX will respond with a copy of an ExecutionReport for the trade in question with ExecType (150) set to Rejected (8) and OrdStatus (39) set to Rejected (8).

15.4 Order Expiration
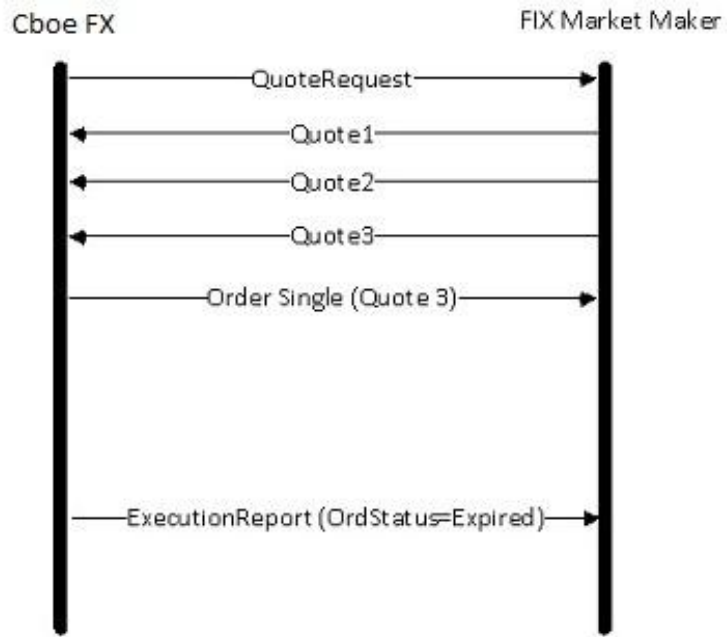
16 Revision History

2008-03-25 – Internal corrections prior to publishing first version

2008-05-22 – Added Migration Guide, performed various cleanup and proofreading 2008-06-09 – Sketched out Averaging section

2008-06-10 – Completed the Averaging section

2008-06-16 – Revised Migration Guide to disambiguate setup of single user/connection from multiple user/connection.

2008-06-26 – Revised handling of Account (1) Tag

2008-07-01 – Removed any mention of Market orders from the spec 2008-07-03 – Removed ClOrdId / OrigClOrdId length restrictions 2008-07-03 – Clarified ExecBroker's meaning

2008-08-13 – Fixed various typos

2008-08-22 – Fixed OrderStatus Execution Report's Tag 150 – only valid value is "I" 2008-08-29 – Fixed NewOrderSingle MinQty – there is no restriction either upper or lower.

2008-09-08 – Fixed CxlRejReason values, as well as various typos and errors 2008-09-09 – OrdType should not be in any ExecutionReports

2008-09-09 – Removed all references to Tag 103 from ExecutionReports – it is not sent. 2008-10-03 – Clarified the case when 20=1

2008-10-10 – Clarified MinQty behavior

2008-10-16 – Updated possible values for Tags 39 and 150 2008-11-06 – Updated illegal characters in Tag 11

2008-11-11 – Clarified value of SendingTime in FIX header 2008-11-25 – Clarified Tags needed for cancel operations

2008-12-03 – Added OrdType=1 to Averaging Requests to make it FIX 4.2 compliant. 2008-12-05 – Explained Tags 119 and 120

2008-12-18 – Clarified section 5 with regard to trade confirmation mechanism. 2008-12-22 – Clarified meaning of Tag 31

2008-12-23 – Clarified use of 141=Y

2009-01-07 – Indicated that Tag 102 is FIX 4.4, not 4.2 2009-01-28 – Corrected MinQty behavior 2009-02-04 – Added "Rejected" to OrdStatus ExecutionReport

2009-03-24 – Added Market order type to New Order Single

2009-04-02 – Removed erroneous references to test requests from section 9.1 2009-04-02 – Indicated that MinQty may cause auto-cancellation

2009-05-08 – Added descriptions for LMT/IOC and PEG order in section 4.1
2009-06-08 – Added text describing Cancel/Replace rejections' role in OrderCancelReplace operations to section 7.2

2009-06-19 – Indicated that Account (Tag 1) can only contain alphanumeric characters or underscores 2009- 08-13 – Fixed typo in section 7.2 concerning Tags 11 and 41.

2010-03-01 – Corrected example for Tag 15 (Currency) in NewOrderSingles section

2010-10-25 – 150 can be "C", i.e. expired, for IOC misses

2011-10-18 – Explained Tag 210 MaxShow

2011-11-14 – Revised semantics of Tags 382/375 in Section 4.2 2012-03-01 – Changed FXi to FX

2012-03-27 – Updated hours of operation in section 1.2 2012-03-30 – Added clarification regarding Resend requests 2012-05-15 – Added clarification for 11=0

2013-11-08 – Updated descriptions of Tags 382/375 to be consistent within Chapter 4 2013-11-13 – Added clarification for Pegged Orders in Section 4.1

2016-03-16 – Added Cboe FX Full Amount Stream information 2017-02-13 – Corrected some inconsistencies throughout the fix spec 2017-02-14 – Updated Trade Confirmation Section 2017-02-22 – Added Full Amount Market Maker Sections 2017-03-09 – Reorganized sections

2017-06-19 – Added Reject Reasons to execution report. 2017-07-17 – Changed Cboe FX Logo.

2017-09-29 – Updated execution report for trades from quotes. 2017-11-21 – Removed inaccurate section.

2018-01-05 – Added Link Direct.

2018-01-24 – Removed Full Amount Quote Response message, as it is no longer used. Adjusted Full Amount Quote Cancel message to remove unused Tags.

2018-01-26 – Fix incorrect NoRelatedSym Tag in Full Amount Quote Request message to be 146, as implemented.

2018-03-21 – Clarify usage of QuoteID Tag in New Order Single - Full Amount/Link Direct - from Taker.

2018-12-03 – Update notes on max show, hidden order minimum order quantity, Full Amount quote canceling, Order Cancel Reject Pending New, liquidity source in spot Execution Report, Quote Acknowledgement reject text and Full Amount Quote Request.

2018-12-20 – New meaning for Tag 110. Clarify Tags 32, 14 and 192. Update daily Restart time.

2019-03-21 – Remove restriction on uniqueness requirements for ClOrdId.

2019-07-15 – Integrate NDF order entry protocol. 2019-07-19 – Clarify Tags 9011, 9030, 9031, 9032.

2019-07-30 – Clarify behavior of CboeFXQuoteLayer Tag.

2019-12-02 – Fix incorrect statement that Security List Message is sent upon logon. 2020-02-12 – Add sections for Cboe Central.

2020-02-14 – Modifications for NDF Full Amount.

2020-02-25 – Add Tag 7002 for mid-match eligible peg.

2020-02-27 – Add Fixing Date and Settlement Date as required for Full Amount NDF Quote.

2020-04-24 – Add notes for customers to validate Security ID, Fixing Date, and Settle Dates before submitting NewOrderSingle and Quote messages.

2020-07-20 – Clarify uniqueness of ExecID (Cboe FX Trade ID) on Execution Reports. Clarify length of UTI field.

2020-08-17 – Note the Cboe FX Trade Desk can set MinQty on behalf of a customer.

2020-09-08 – Clarify Sunday start time for Order Gateways. Combine Quote Cancel and Quote Acknowledgment sections for Spot ECN Quoting Interface.

2020-10-02 – Add Tag 40 to all Execution Report messages. Add section on Cancel on Disconnect logic. Note Resend messages only send trades. Note QuoteCancel messages are used to cancel multiple quotes with a single message.

2020-10-28 – Fix error which wrongly had Tag 18 included on Execution Report messages. Add details on NZD and PHP date rolls.

2020-11-19 –

- Added Text (58) for ExecutionReports on trades which matched at mid.
- Clarified when MinQty (110) is greater than OrderQty (38), Cboe FX uses the value of the OrderQty
- (38) as the MinQty.
- Clarified Side (54) indicates direction relative to Symbol (55) and not the Currency (15).
- Noted on the Spot ECN a Market Order (40=1 or 40=C) can have a Day TimeInForce (59=0), but is treated as an IOC (59=3) TimeInForce for matching purposes. On all other Cboe FX platforms Market Orders without an IOC TimeInForce are rejected.
- Added 39=1 (Partially Filled) to Order Cancel Reject (35=9) which was previously missing in the spec.
- Clarify Execution reports that are an Order Cancel Response (39=4, 150=4) always have LastShares (32) = 0.

2020-12-09 – Fix issue where Tag 40 appeared to be sent on filling status execution reports.

2021-01-21 – Clarify behavior of Order Status Request after a disconnect.

2021-03-01 – Remove Minimum Trade Size Restrictions for NDFs. Clarify Final State messages are sent only when the session is the passive side of a trade.

2021-03-30 –

- Clarify FIX 4.2 is the protocol version for Spot Full Amount Taking.
- Fix a bad link in the Spot Full Amount taking Reference table.
- Add additional color on peg orders, term currency trading, and quote cancel behavior.
- Remove all references to Link Direct. 2021-04-20 – Add details of algo offering.

2021-08-02 –

- Update Section 6.1.3 with additional details concerning algo order types.
- Rename custom Tags HSFXQuoteLayer and HSFXTradeStatus to CboeFXQuoteLayer and CboeFXTradeStatus respectively.
- Other formatting changes and minor edits throughout the spec.

2021-12-10 –

- Section 1.7.1 NDF Overview.
- Section 4.1 Logon- From Client.
- Section 8.2 8.2 Security List Message – From Server.
- Section 15 revmoFull Amount Examples.
- Section 6.1.1 New Order Single – From Client.
- Section 6.1.4 Peg Orders.

2022-03-31 –

- Added peg orders information for NDFs (Cboe SEF & Cboe Swiss) effective as of April 1. *Note Cboe Swiss decommissioned end of May 2023.

2022-05-09 –

- Added Tag 9030, Unique Trade Identifier (UTI), to now be included in Execution Reports for Cboe Swiss (formerly Cboe SEF only). *Note Cboe Swiss decommissioned end of May 2023.
- Added Tag 9031, Unique Swap Identifier (USI), to now be included in Execution Reports for Cboe Swiss (formerly Cboe SEF only). *Note Cboe Swiss decommissioned end of May 2023.

2022-07-20 –

- Added new value for Tag 18 (ExecInst), 'M', which indicates a peg to mid.

- The value of Tag 7002 (PegMidMatch) and Tag 211 (PegDifference) will both be ignored If a customer sets a value of 'M' in Tag 18.

2022-08-25-
- Remove Tag 9100 reference.
- Indicate Tag 9110 is optional and the default is Low on Algo sessions.
- New New Order Single can be converted with no changes for Algo sessions.

2022-12-26-
- Updated info on Tags 9030,9031 and 9032.
- Updated info on Tags 375

2023-02-06-
- Added note indicating peg to mid not supported in NDF.

2023-04-25-
- Removed line on section 6.1.1 "stream NDF prices to Cboe n, the MinQty (Tag 110) field must be set with a valid value"

2023-06-26-
- Cboe Swiss ("Off-SEF) decommissioned as of end of May 2023. Cboe SEF available at LD4 as of June 2023.
- Addition of Cboe SEF Tag 25004 (OEOID = Identifies the Order Entry Operator responsible for an order message). Required Tag effective December 15, 2023.
- Various formatting updates.

2023-08-07
- NDF note added for Cancel Replace Request. Update messages missing required OEOID Tag.

2023-09-29
- Clarification of Tag 1 length 20 characters.

2023-10-18
- Adding security list (35=x) for Spot ECN.

2023-11-14
- Adding UPI Code (Tag 2892) to Security List (35=x) for NDFs.
- Adding RTN (Tag 9039) to Execution Reports for NDFs

2024-02-16
- Adding note: For NDF only, All Orders must be submitted in Settlement Currency terms, in Notional Amounts with whole integers.