



# Cboe Options Exchanges

## Binary Order Entry

## Specification

Version 2.11.68

September 3, 2024

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## 1 Introduction

### 1.1 Overview

This document describes Binary Order Entry (BOE), the Cboe proprietary order entry protocol.

Where applicable, the terminology (e.g., time in force) used in this document is similar to that used by the FIX protocol to allow those familiar with FIX to more easily understand BOE. This document assumes the reader has basic knowledge of the FIX protocol.

BOE fulfills the following requirements:

- CPU and memory efficiency. Message encoding, decoding, and parsing are simpler to code and can be optimized to use less CPU and memory at runtime.
- Application level simplicity. State transitions are simple and unambiguous. They are easy to apply to a Member's representation of an order.
- Session level simplicity. The session level protocol (login, sequencing, replay of missed messages, logout) is simple to understand.

While Cboe has strived to preserve feature parity between FIX and BOE where possible, some features may only be available in one protocol or the other.

All binary values are in little Endian (used by Intel x86 processors), and not network byte order.

Each message is identified by a unique message type. Not all message types are used in all Cboe's trading environments globally. A listing of the supported message types is provided in Section 10 - List of Message Types.

All communication is via standard TCP/IP.

### 1.2 Certification Requirement

All customers must complete a formal certification in the appropriate Cboe Certification test environment before production orders or quotes will be accepted by Cboe. Formal certification scripts can be found in the [Cboe Customer Web Portal](#). Customers may complete the formal certification using the Certification Tool app and selecting the applicable certification script. Customers are advised to test all functionality they plan to use in production in the Cboe Certification test environment.

### 1.3 Document Format

Blue highlighted sections highlight key differences between the Cboe US Options Exchanges (BZX Options Exchange “**BZX only**”, Cboe Options Exchange “**C1 only**”, C2 Options Exchange “**C2 only**”, and EDGX Options Exchange “**EDGX only**”).

### 1.4 Hours of Operation

All times noted are Eastern time zone (ET) based.

See the respective exchange websites for holiday schedules.

Cboe Options Exchanges support a Pre-Market Queuing Session that allows orders to be entered and queued prior to the start of the Global Trading Hours (GTH) session and the Regular Trading Hours (RTH) session. The GTH Queuing session allows SPX, VIX, and XSP orders marked as both GTH and RTH only order to be entered and queued. C1 also supports a Curb session in addition to GTH and RTH sessions.

For more information on the Cboe Opening Process, please refer to the Cboe Opening Process Specification.

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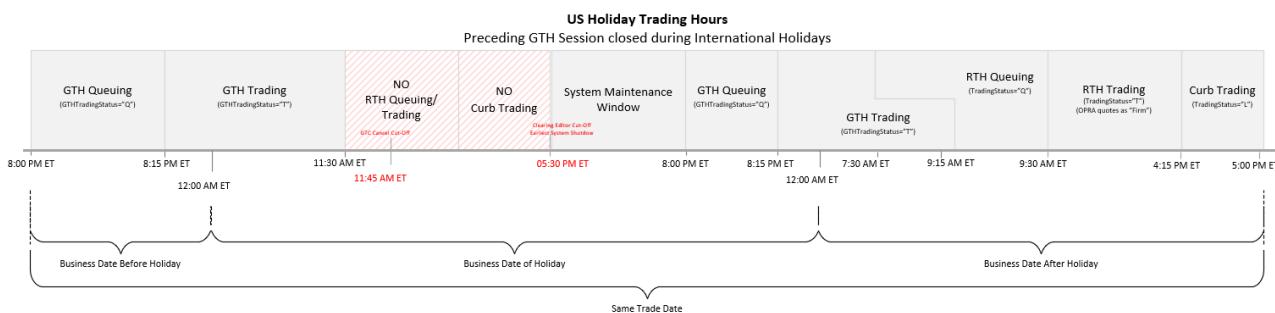
Cboe Options Exchanges do not support a closing auction, but do support extended trading for options on select ETF and index products. All orders remaining after the Regular Trading Session that are not eligible for Extended Trading will be cancelled automatically. All orders remaining after the Extended session will be cancelled automatically. Members will receive Order Cancelled messages for all automatically cancelled orders.

	<b>C1</b>	<b>C2</b>	<b>BZX</b>	<b>EDGX</b>
<b>Order Acceptance</b>	8:00 pm – 8:15 pm ET (SPX/VIX/XSP)	7:30 am - 9:30 am ET (All Products)	7:30 am - 9:30 am ET (All Products)	7:30 am - 9:30 am ET (All Products)
	7:30 am - 9:30 am ET (All Products)			
<b>GTH</b>	8:15 pm - 9:25 am ET (SPX/VIX/XSP)	N/A	N/A	N/A
<b>RTH</b>	9:30 am - 4:00 pm ET (All Products)	9:30 am - 4:00 pm ET (All Products)	9:30 am - 4:00 pm ET (All Products)	9:30 am - 4:00 pm ET (All Products)
	9:30 am - 4:15 pm ET (Select ETF's/ETN's and Index Products)	9:30 am - 4:15 pm ET	9:30 am - 4:15 pm ET	9:30 am - 4:15 pm ET
<b>Curb</b>	4:30 pm – 5:00 pm ET (SPX/VIX/XSP)	N/A	N/A	N/A

#### 1.4.1 Holiday Sessions (C1 only)

On certain US-centric holidays, where European and/or Asian markets are open, trading is suspended for RTH and Curb but continues for GTH, resulting in two sets of non-contiguous GTH sessions before RTH.

Figure 1: US Holiday Trading Hours



On days where the market closes early, RTH will conclude at 1:15 p.m. ET and there will not be a subsequent Curb session. The market will remain closed until the next GTH session.

On certain International Holidays (i.e. New Years' Day) there is no GTH or RTH trading and the C1 Options market is closed. Notice will be sent prior to any holiday communicating the specific hours and sessions that will be available.

## 1.5 Data Types

The following data types are used by BOE. The size of some data types varies by message. All data types have default values of binary zero, in both Member to Cboe and Cboe to Member contexts.

- **Binary:** Little Endian byte order, unsigned binary value. The number of bytes used depends on the context.
  - **One byte:** FE = 254
  - **Four bytes:** 64 00 00 00 = 100
- **Signed Binary:** Little Endian byte order, signed two's complement, binary value. The number of bytes used depends on the context.
  - **One byte:** DF = -33

- Four bytes: 64 00 00 00 = +100
- Binary Price: Little Endian byte order value, signed two's complement, eight bytes in size, with four implied decimal places. So, if the value is -123,400, the actual value taking into account implied decimal places is -12.34.
  - 08 E2 01 00 00 00 00 00 = 123,400/10,000 = 12.34
  - F8 1D FE FF FF FF FF = -123,400/10,000 = -12.34
- Short Binary Price: Little Endian byte order value, signed two's complement, four bytes in size, with four implied decimal places. So, if the value is 12,300, the actual value taking into account implied decimal places is 1.23.
  - 0C 30 00 00 = 12,300/10,000 = 1.23
- Signed Binary Fee: Little Endian byte order value, signed two's complement, eight bytes in size, with five implied decimal places. So, the value is -123,000 is -1.23 after taking account for the five implied decimal places.
  - 88 1F FE FF FF FF FF = 123,000/100,000 = -1.23
- Alpha: Uppercase letters (A-Z) and lowercase letters (a-z) only. ASCII NUL (0x00) filled on the right, if necessary. The number of bytes used depends on the context.
- Alphanumeric: Uppercase letters (A-Z), lowercase letters (a-z) and numbers (0-9) only. ASCII NUL (0x00) filled on the right, if necessary.
- Text: Printable ASCII characters only. ASCII NUL (0x00) filled on the right, if necessary.
- DateTime: Little Endian byte order, eight bytes. The date and time, in UTC, represented as nanoseconds past the UNIX epoch (00:00:00 UTC on 1 January 1970). The nanoseconds portion is currently ignored and treated as 0 (i.e. the times are only accurate to microseconds) on input, and will always be set to 0 by Cboe in outgoing messages. However, Cboe **may begin populating the nanoseconds portion at any time without warning.**  
For example: 1,294,909,373,757,324,000 = 2011-01-13 09:02:53.757324 UTC.
- Date: Little Endian byte order, unsigned binary value, 4 bytes in size. The YYYYMMDD expressed as an integer.

## 1.6 Optional Fields and Bit fields

Some messages such as New Order message and Modify Order message have a number of optional fields. A count and number of bitfields in the message specify which optional fields will be present at the end of the message. If a bit is set, the field will be present. Fields are appended to the end of the message. There is no implicit framing between the optional fields. In order to decode the optional fields, they must be appended in a particular order to the end of the message. The fields of the first bitfield are appended first, lowest order bit first. Next, the fields of the next bitfield are appended, lowest order bit first. This continues for all bitfields. While certain reserved bits within a defined bitfield are used within another Cboe market and will be ignored, bits that are reserved for future expansion must be set to 0 when noted in the bitfield description.

The size, data type, and values for each field are described in Section 7 – List of Optional Fields.

Note that the set of optional fields returned for each Cboe to Member message type is determined at session login (using the Login Request message); hence, the exact size and layout of each message received by the client application can be known in advance. **Any requested optional field, which is irrelevant in a particular context, will still be present in the returned message, but with all bytes set to binary zero (0x00).**

Each return message from Cboe to Member indicates the optional fields which are present, even though the Member indicated during login which optional fields are to be sent. The reason for the inclusion (and duplication) is so that each message can be interpreted on its own, without having to find the corresponding login request or response to

know which optional fields are present. So, for example, in a log file, decoding a message requires only that single message.

Example messages are shown with each message type, which should help to make this concept clear.

## 1.7 Protocol Features

The exchange does not guarantee messages sent by Members/TPHs to the exchange, including through protocols such as TCP. Members/TPHs are responsible to monitor the status of the messages they send to the exchange.

### 1.7.1 Architecture and Message in Flight Settings

Each BOE order handler process will allow a single TCP connection from a member. Connection attempts from unknown source IP ranges will be blocked to prevent unauthorized access to BOE ports. The Cboe NOC should be contacted in the event that a Member desires to connect from a new source IP range.

Each BOE order handler will connect, using a proprietary UDP protocol, to all matching units. Connections from order handlers to matching engines are latency equalized. The connections between order handlers and matching units are governed by an internal flow control mechanism to control burst rates.

The number of messages in flight between an order handler and a matching engine is 128. In addition, when the total number of unacknowledged messages exceeds 1,024, the BOE order handler will stop reading from the member-facing TCP socket. This will cause the order handler to stop removing bytes from the TCP receive buffer, and will prevent the member from sending more TCP data once the member's send buffer is full.

When the total number of unacknowledged messages falls below 960, the reading of the member facing TCP socket will be resumed.

For message in flight counting purposes the following logic will be used:

- A new order message will count as one message;
- A new complex order with up to 100 legs will count as one message;
- A new order cross or new complex order cross auction message with one agency side and up to 10 contra parties will count as one message;
- A quote update with up to 20 individual quote sides will count as one message.
- In contrast, a single TCP segment sent by a member containing two quote update messages, each with five quote sides, will count as two messages

Cboe may either update the message in flight or the total number of unacknowledged messages settings with notice. Changes to reduce either limit will be made only with two weeks' notice. Cboe reserves the ability to increase either limit immediately with notice.

### 1.7.2 Complex Instruments and Signed Prices (C1, C2, and EDGX only)

All price fields in the BOE protocol are signed values capable of accommodating complex instruments that can be negative (See Data Types) for a description and an example of using the Binary Price type with a negative price). For an example of the use of the Binary Price type with negative price values in an application message, see the example BOE message in `New Complex Order` message.

### 1.7.3 Done For Day Restatements

Good 'Til Cancel (GTC) and Good 'Til Day (GTD) orders can result in order persisting between sessions. The Cboe BOE protocol provides a mechanism for clients to request end-of-day restatement of GTC/GTD orders that will be persisted to the next trading session. See Section 10 – Port Attributes for information on available port attributes, including Done For Day Restatements.

When enabled, Done For Day Restatement messages are sent to connected clients after the trading session ends, for each order that will persist to the next trading session. Any time prior to the cutoff, customers may send Cancel Order messages for any open GTC and GTD orders.

Done For Day Restatements are represented using Order Acknowledgement messages with the following optional attributes set:

- *BaseLiquidityIndicator* = A (Added Liquidity), bitfield 5, bit position 7
- *SubLiquidityIndicator* = D (Done For Day), bitfield 7, bit position 1

To receive Done For Day Restatements, the Done For Day Restatement port attribute must be set (contact Cboe Trade Desk), and customers **must** register to receive *BaseLiquidityIndicator* and *SubLiquidityIndicator* optional fields on Order Acknowledgement messages via the Logon Request message (See Section 3.1.1 – Login Request for details on registering to receive optional fields on a per-message basis). If the Done For Day Restatement port attribute is set and the bitfield Logon Message registration for the Order Acknowledgement message does not include but *BaseLiquidityIndicator* and *SubLiquidityIndicator*, the logon attempt will fail.

#### 1.7.4 Carried Order Restatements

Good 'Til Cancel (GTC) and Good 'Til Day (GTD) orders can result in orders persisting between sessions. The Cboe BOE protocol provides a mechanism for clients to request restatement of orders that have been carried forward from the previous business day trading session. See Section 10 – Port Attributes for information on available port attributes, including Carried Order Restatements.

When enabled, Carried Order Restatements are sent to connected clients for each product on the Options Exchange for which orders have been carried forward from the previous business day trading session. Carried Order Restatements are sent after connection establishment and before regular trading activity messages on a per-product basis.

Carried Order Restatements are represented using Order Acknowledgement messages with the following optional attributes set:

- *BaseLiquidityIndicator* = A (Added Liquidity), bitfield 5, bit position 7
- *SubLiquidityIndicator* = C (Carried), bitfield 7, bit position 1

To receive Carried Order Restatements, the Carried Order Restatement port attribute must be set (contact CFE Trade Desk), and customers **must** register to receive *BaseLiquidityIndicator* and *SubLiquidityIndicator* optional fields on Order Acknowledgement messages via the Logon Request message (See Section 3.1.1 – Login Request for details on registering to receive optional fields on a per-message basis). If the Carried Order Restatement port attribute is set and the bitfield Logon Message registration for the Order Acknowledgement message does not include but *BaseLiquidityIndicator* and *SubLiquidityIndicator*, the logon attempt will fail.

#### 1.7.5 Cancellation of Carried Orders Between Trading Sessions

GTC and GTD orders persist within the Cboe Options Exchanges between business days. On BZX, EDGX, and C2 the latest time when GTC/GTD orders may be cancelled is 4:45 p.m. ET.

On C1 Options the latest time when GTC/GTD orders may be cancelled is 5:15 p.m. ET (15 minutes following the close of the Curb Session).

GTC, GTD, and Day orders also persist between multiple GTH trading sessions on the same business day in connection with a holiday. On US holidays, Cancel Order messages for GTC orders may be issued until 11:45 a.m. ET, which is 15 minutes after the first GTH session ends at 11:30 a.m. ET. The Multi-Segment Holiday Day Order Handling port attribute will enable Members to designate if Day orders are cancelled or preserved across holiday trading segments comprising a single business date. See Section 10 – Port Attributes for information on available port attributes.

## 1.7.6 Display Indicator Features

Orders are eligible for all of the sliding features described below. Quotes are eligible for the sliding behaviors described below if they are received with a price that locks the NBBO and with a *PostingInstruction* eligible for price sliding. Quotes that also cross the NBBO or displayed Cboe book will be accepted if within a configurable buffer range through the NBBO or displayed Cboe book. The buffer is set to 5% with a minimum of \$0.05 and a maximum of \$1.00.

For **BZX only**, quotes and orders that are marked as “Post Only” will execute against resting liquidity as a remover and be charged applicable removal fee codes if the amount of price improvement of the removal execution exceeds the expected rebate that the order or quote would have received if it had posted at its limit price.

### Display-Price Sliding (**BZX Only**)

If the original limit price of the unexecuted remainder of a day order does not lock or cross the NBBO then Cboe works the order at the original limit price while displayed at the nearest permissible quoting increment. If the original limit price does lock or cross the NBBO then Cboe makes available Display-Price Sliding.

Display-Price Sliding adjusts the original limit price on entry to the locking price of the NBBO. It will be ranked and worked at a price locking the NBBO but will temporarily adjust the displayed price to the nearest permissible quoting increment. When the NBBO widens, the display price will be readjusted to the adjusted limit price. The display price may be temporarily less aggressive than the adjusted limit price or working price.

Multiple Display-Price Sliding does not permanently adjust the original limit price on entry, but allows for Display-Price Slid orders to continue to have their display **and** working prices adjusted towards their original limit price based on changes to the prevailing NBBO.

Contra-side Post Only orders that are received when a Display-Price Slid order is working at a locking price with the NBBO will not result in a reject of a contra-side Post Only order but will instead result in the working price of the Display-Price Slid order to be repriced to one penny away from the locking price.

### Price Adjust (**BZX, C1, C2, and EDGX Only**)

If the limit price of an order does not lock or cross the NBBO, then the order will be ranked and displayed at the nearest permissible quoting increment.

If the limit price of a Price Adjust eligible order locks or crosses the NBBO, the limit price will be adjusted on entry to the locking price of the NBBO, while the displayed price and ranked price will be temporarily adjusted to the nearest permissible quoting increment. Price Adjust orders will never be ranked at the locking price or at a non-displayable price increment. If the NBBO widens, the displayed price and ranked price will be readjusted to the adjusted limit price.

The limit price of a Multiple Price Adjust order will not be permanently adjusted on entry if the limit price crosses the NBBO. The displayed price and ranked price will be the nearest permissible quoting increment and will be adjusted towards the original limit price based on changes in the prevailing NBBO.

### NoRescrapeAtLimit (**BZX Only**)

Applicable only to fully routable IOC orders (9303=R **and** 59=3). After walking the price down to the limit, there will be no final scrape at Cboe and the cancel code will state “X: Expired” rather than “N: No Liquidity”.

## 1.7.7 Default Exchange Risk Protections

### 1.7.7.1 Market Order NBBO Width Protection for Simple Orders

Market Orders are rejected if the NBBO width is greater than 100% of the midpoint (with a minimum value of \$5.00 and maximum value of \$10.00).

**Example**

- NBBO = \$1.00 x \$4.00
- Midpoint =  $\$2.50 \times 100\% = \$2.50$  (min of 5.00 is used instead)
- NBBO Width=  $\$4.00 - \$1.00 = \$3.00$

Even though the width is greater than 100% of the midpoint, Market Orders entered are accepted since the \$5.00 minimum applies in this example.

#### **1.7.7.2 Drill-Through Protection for Simple Limit Orders**

Each simple limit order will be assigned a drill-through price that allows simple orders to be executed up to a maximum capped price through the contra side NBBO at time of order entry. The drill-through mechanism will repeatedly post the order at a more aggressive price. If the order reaches its limit price at any time during the iterative drill-through process, the order will remain at its limit price and the drill-through protection mechanism will not continue. The preset duration is one second.

Adjustments that would lock or invert an away displayed market will initiate a SUM auction. Eligible complex orders may also initiate a COA throughout the iterative process.

Market orders submitted with a *TimeInForce* (FIX Tag 59) of Day along with elected stop orders will be eligible for iterative drill-through price protection.

- Sell market orders will drill-through down to the minimum tick for the class where they will rest until cancelled or executed in full.
- Buy market orders will drill-through to the maximum allowable price for the class where they will rest until cancelled or executed in full.
- Market orders submitted with a *TimeInForce* of IOC will trade on arrival, capped at the first drill-through price level.

Separate stop and stop limit orders elected as a result of the same election trigger (NBBO update or last sale) will all use the same drill-through reference price. This may include orders with multiple stop prices if the election trigger covers multiple price levels. When multiple stop orders are elected as a result of the same election trigger, they are sequenced in time priority based on their order entry time.

- If an iterative drill-through protection is in progress, newly-elected stop and stop limit orders will join the current drill-through price. The newly-elected stop and stop limit orders will be prioritized behind orders already in drill-through.
- If no iterative drill-through is in progress, the initial drill-through reference price for stop and stop limit orders elected by the same market data event will be set to the contra side NBBO

Triggered Market-On-Close and Limit-On-Close orders are handled the same as elected stop and stop limit orders with respect to drill-through reference price and priority.

- Existing market-width checks prevent market orders from executing if the bid/ask width is wider than a specified amount. This protection will be bypassed for triggered Market-On-Close orders and triggered stop orders.
- Existing Fat Finger limit price reasonability checks reject limit orders priced at an overly-aggressive level. Such protections will be bypassed for triggered Limit-On-Close orders and triggered stop limit orders.

The Drill-Through Price is calculated by taking the NBB or NBO and subtracting or adding, respectively, the Drill-Through Amount from the table below. Calculated drill-through prices at an invalid tick increment for the class will be widened to the next valid tick.

NBBO Price	Drill-Through Amount (All Symbols)
\$0.00 – \$5.00	\$0.10
\$5.01 – \$20.00	\$0.20
\$20.01 – \$50.00	\$0.30
\$50.01 – \$100.00	\$0.40
\$100.01 & Above	\$0.50

#### 1.7.7.3 Market/Limit Order Drill-Through for Complex Orders

Default Drill-Through Protections will be applied to all complex limit and market orders that will cap the price of the order relative to the SNBBO at the time of order entry. Exchange defaults are 5% through the contra-side of the SNBBO. For orders other than SPX/SPXW, the price cap level will be no larger than \$0.25 through the contra-side SNBBO. For SPX/SPXW, the price cap will be no larger than \$2.00 through the contra-side SNBBO. The price cap will be no smaller than \$0.02 through the contra-side SNBBO for all orders.

For complex orders not specifying a drill-through override with *DrillThruProtection* (FIX Tag 6253), the drill-through mechanism will repeatedly post the order at a more aggressive price. If the order reaches its limit price at any time during the iterative drill-through process, the order will remain at its limit price and the drill-through protection mechanism will not continue. The preset duration is one second.

Sell market orders will drill through to the minimum tick for the class, where they will rest until cancelled or executed in full. Buy market orders will drill through to the maximum allowable price for the class, where they will rest until cancelled or executed in full. Market orders submitted with a *TimeInForce* of IOC will trade on arrival, capped at the first drill-through price level.

Adjustments that would lock or invert an away displayed market will initiate a SUM auction. Eligible complex orders may also initiate a COA throughout the iterative process.

Customers can optionally set more or less restrictive Drill-Through Protections on individual orders using *DrillThruProtection* on the New Order Multileg message.

#### 1.7.7.4 Exchange Default Fat Finger Limits

Fat Finger Checks are mandatory for both Pre-Market and Regular Sessions and applied to both simple and complex orders. The following Exchange defaults are applied if not specified by the user. Fat Finger checks are not applicable for any Multi-Class Spread instruments that trade on the floor only. Fat Finger checks are applicable for Multi-Class complex instruments containing only SPX or SPXW legs as they are eligible for trading on the electronic book.

Pre-Open Curb/GTH Session (VIX/XSP)		
Limit Price Range	Fat Finger % Default	Fat Finger Dollar-Based Limit Default
\$0.00 – \$1.99	No Value	\$1.00
\$2.00 – \$5.00	No Value	\$1.50
\$5.01 – \$10.00	No Value	\$2.00
\$10.01 – \$20.00	No Value	\$3.00
\$20.01 – \$50.00	No Value	\$4.00
\$50.01 – \$100.00	No Value	\$6.00
\$100.01 & Above	8%	Not Valid

Regular Session		
Limit Price Range	Fat Finger % Default	Fat Finger Dollar-Based Limit Default
\$0.00 – \$1.99	No Value	\$0.50
\$2.00 – \$5.00	No Value	\$0.75

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\$5.01 – \$10.00	No Value	\$1.00
\$10.01 – \$20.00	No Value	\$1.50
\$20.01 – \$50.00	No Value	\$2.00
\$50.01 – \$100.00	No Value	\$3.00
\$100.01 & Above	4%	Not Valid

SPX and SPXW are considered Exception Classes and have unique Fat Finger default values for the Pre-Open and Regular sessions.

Exception Class Pre-Open Curb/GTH Session (SPX)		
Limit Price Range	Fat Finger % Default	Fat Finger Dollar-Based Limit Default
\$0.00 – \$1.99	No Value	\$15.00
\$2.00 – \$5.00	No Value	\$15.00
\$5.01 – \$10.00	No Value	\$15.00
\$10.01 – \$20.00	No Value	\$15.00
\$20.01 – \$50.00	No Value	\$20.00
\$50.01 – \$100.00	No Value	\$20.00
\$100.01 & Above	No Value	\$25.00

Exception Class Regular Session		
Limit Price Range	Fat Finger % Default	Fat Finger Dollar-Based Limit Default
\$0.00 – \$1.99	No Value	\$1.00
\$2.00 – \$5.00	No Value	\$1.50
\$5.01 – \$10.00	No Value	\$2.00
\$10.01 – \$20.00	No Value	\$3.00
\$20.01 – \$50.00	No Value	\$4.00
\$50.01 – \$100.00	No Value	\$6.00
\$100.01 & Above	16%	Not Valid

See the [Web Portal Port Controls Specification](#) for additional details on how Members can manage fat finger settings intraday.

#### 1.7.7.5 Default Fat Finger Limits for Quote Updates

Quotes that cross the NBBO or displayed Cboe book will be accepted if within a configurable buffer range through the NBBO or displayed Cboe book. The buffer is set to 5% with a minimum of \$0.05 and a maximum of \$1.00.

#### 1.7.7.6 Maximum Open Order Limits

The exchange limits the maximum number of open orders allowed on a BOE or BOE Quote port to 200,000 per port. New orders will be rejected once this limit is breached until the number of open orders drops back below 200,000. Note this limit is only for orders and does not include open quotes sent over a BOE Quote port.

### 1.7.8 Risk Root

This document uses the term “Risk Root” to describe Cboe Options Risk Management functionality that is applied at the symbol-level. The Risk Root is defined as the underlying symbol. This impacts what value must be sent in the defined *RiskRoot* fields when performing a mass cancel or a risk trip reset.

See the [Risk Management Specification](#) for more details.

## 1.7.9 Market Maker Trade Notifications (C1 Only)

Floor Trade Notifications (MMTNs) will be sent to Market Makers if they are identified as the contra party of a floor trade. MMTN messages will be sent over a designated FIXDrop or BOE order entry port. See Section 10 – Port Attributes section for information on available port attributes related to MMTNs.

Market Makers that receive a Floor Trade Notification should use the Floor Trade Confirmation message to respond to the NNTN if they agree with the terms of the trade. Alternatively, a Market Maker can use the Add Floor Trade message to enter their own version of the trade.

## 1.7.10 Cabinet and Sub-Cabinet Orders (C1 Only)

Cabinet orders are identified via *PriceType* = 0 and must have a valid *TimeInForce* of Day or GTC. Cabinet orders can support a position status of Open or Close identified via the *OpenClose* field. Cabinet orders will only trade with other cabinet orders on the book or floor depending on *FloorRoutingInst* and *FloorDestination* values.

### 1.7.10.1 Valid Pricing

Orders in non-penny classes must have a limit price **less than or equal to** \$0.01 and orders in penny classes must have a limit price **less than** \$0.01. Limit prices may be up to 4 decimal places.

### 1.7.10.2 Invalid Pricing

Orders in penny or non-penny classes priced **greater than** \$0.01 and orders in penny classes priced **equal to** \$0.01 will be rejected. Orders with a limit price that locks or crosses a resting non-cabinet order will be rejected.

### 1.7.10.3 Market Data

Cabinet orders or executions will not be disseminated on OPRA but will be available on [http://cdn.cboe.com/resources/membership/US\\_EQUITIES\\_OPTIONS\\_MULTICAST\\_PITCH\\_SPECIFICATION.pdf](http://cdn.cboe.com/resources/membership/US_EQUITIES_OPTIONS_MULTICAST_PITCH_SPECIFICATION.pdf) and [http://cdn.cboe.com/resources/membership/US\\_OPTIONS\\_MULTICAST\\_TOP\\_SPECIFICATION.pdf](http://cdn.cboe.com/resources/membership/US_OPTIONS_MULTICAST_TOP_SPECIFICATION.pdf) feeds.

## 1.7.11 Auction Orders

For more information on the following Auction Only Orders, please refer to the [Opening Process Specification](#).

Order Type	Order Entry Details	
Market-On-Open (MOO)	<i>OrdType</i> = 1 ( <i>Market</i> )	<i>TimeInForce</i> = 2 ( <i>At the open</i> )
Limit-On-Open (LOO)	<i>OrdType</i> = 2 ( <i>Limit</i> ) <i>Price</i> = [price]	<i>TimeInForce</i> = 2 ( <i>At the open</i> )
Settlement Liquidity On Open (SLOO)	<i>OrdType</i> = 2 ( <i>Limit</i> ) <i>Price</i> = [price]	<i>TimeInForce</i> = 2 ( <i>At the open</i> ) <i>ExecInst</i> = r ( <i>Settlement Liquidity</i> )

## 1.7.12 Port Types

All BOE port types may be ordered using the **Logical Port Request** tool on the Customer Web Portal. Port attribute changes may also be requested through this tool by submitting a ‘Modify’ request for one or more existing BOE ports.

### 1.7.12.1 BOE Order Ports

Standard BOE ports support simple and complex order entry but do not support the usage of *Quote Update* message types and *Purge Orders* message types. The attempted usage of any of these message types on standard BOE order ports will result in a rejection of the disallowed message.

Standard BOE ports are limited to 5,000 inbound messages per second. Once the inbound limit is reached new orders are rejected, modifies are handled as cancels, and cancels are processed normally.

### 1.7.12.2 BOE Bulk Quoting Ports

BOE Bulk Quoting ports are intended for use by market makers quoting large numbers of simple options series. As a result, they are unthrottled in terms of number of messages that may be accepted within any given period of time from a TPH. However, market makers may still experience poor performance on Bulk Quoting ports if excessive message traffic is sent.

The *PreventMatch* field may not be specified on the *Quote Update* message and Match Trade Prevention is only available if defaulted at the port level. For Bulk Quoting ports, only Cancel Newest, Cancel Oldest, or Cancel Both are permitted. If a Bulk Quoting port is not configured with both a default MTP Modifier and Unique ID Level, Match Trade Prevention will be disabled.

**Bulk Quoting Port Order Acceptance Table**

Message	Simple/Complex	Accepted over Bulk Quoting Port?	Other Conditions
Quote Update	Simple	Yes	
Quote Update (short)	Simple	Yes	
New Order	Simple	Yes	Must have a <i>TimeInForce</i> value of Day or GTD with a same day expiration on C1, C2, and EDGX.
New Order (Auction Response)	Simple	Yes	
New Order Cross (AIM or QCC)	Simple	No	
New Order Cross Multileg	Simple	No	
Purge Orders	Simple/Complex	No	
Reset Risk	Simple/Complex	Yes	
New Complex Instrument	Complex	Yes	
Quote Update	Complex	No	
New Complex Order	Complex	Yes	Must be Post Only ( <i>RoutingInst</i> = P). Must have a <i>TimeInForce</i> value of Day or GTD with a same day expiration on C1, C2, and EDGX.
New Complex Order (COA Response)	Complex	Yes	

**Bulk Quoting Port Quote/Order Behavior Matrix**

The following matrix describes the liquidity removal behavior of quotes and orders sent on Bulk Quoting ports. Bulk Quoting ports are available for use by all customers but only Market Makers may use *Quote Update* messages. Orders sent on Bulk Quoting Ports are allowed to remove liquidity only on BZX Options. On C1, C2, and EDGX Options, only registered Market Makers are allowed to remove liquidity using *New Order* messages.

Once a quote or order is posted to the exchange book, liquidity removal against any contra capacity is always allowed in the case that a subsequent event causes the resting quote or order to be re-evaluated, such as the Opening/Re-Opening Process.

- Only Market-Makers can send *Quote Update* messages, and such messages can only be sent on a Bulk Quoting Port.

- Liquidity removal using either New Order or Quote Update messages on Bulk Quoting ports is restricted to appointed Market-Makers only. Removal of any resting order with a Quote Update message by a Market-Maker when not appointed in the class will result in a *quoteResult* reject of 'r' = Invalid Remove or 'A' = Market Maker must be registered for New Orders. For purposes of liquidity removal, an appointment using any one EFID will allow for liquidity removal for all EFIDs used by the Market-Maker.
- New Order messages can be sent over FIX/BOE Ports and Bulk Quoting Ports by all capacities. However, on C1, C2, and EDGX, non-Market-Maker New Order messages sent over a Bulk Quoting Port must be marked "post only" and thus cannot remove liquidity.

	Bulk Quoting Port				FIX/BOE Port			
	BZX	C2	EDGX	C1	BZX	C2	EDGX	C1
Can a Market-Maker send order messages?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can a Market-Maker send quote messages?	Yes	Yes	Yes	Yes	No	No	No	No
Can a non-Market-Maker send order messages?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can a non-Market-Maker send quote messages?	No	No	No	No	No	No	No	No
Can an aggressing Market-Maker remove a resting Market-Maker quote or order?	Yes	No	No	No	Yes	Yes	Yes	Yes
Can an aggressing Market-Maker remove a resting non-Market-Maker order?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can an aggressing non-Market-Maker remove a resting Market-Maker quote or order?	Yes	No	No	No	Yes	Yes	Yes	Yes
Can an aggressing non-Market-Maker remove a resting non-Market-Maker order?	Yes	No	No	No	Yes	Yes	Yes	Yes

### 1.7.12.3 BOE Purge Ports

BOE Purge Ports support a single Purge Orders message type. Members may use this port type to request a cancellation of groups of orders, including orders across multiple BOE Order or Bulk Quoting ports.

### 1.7.13 Floor Routing (C1 Only)

All orders routed to the floor must include explicit routing instructions that includes two features: 1) floor routing instruction indicating Direct or Default routing behavior and 2) floor destination information. Floor routing behavior is specified in *FloorRoutingInst* (22303). Direct routing sends the order to the indicated PAR workstation, while default routing indicates that electronic execution is preferred, but the order may be routed to the indicated PAR if it cannot be processed electronically.

Examples of conditions which cause default routing to the Floor include:

- a complex order having an AON contingency
- a complex order with multiple underlying components
- not held orders

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Floor destination instructions are specified in *FloorDestination* (22100), indicating a PAR workstation (ex. W001) to route to on the floor (or 'PARO' to rout to the Floor PAR Official of the underlying symbol) if not specified on the inbound message. See Section 10 – Port Attributes for information on available port attributes, including *Default FloorRoutingInst* and *Default FloorDestination*.

Order Tags/Port Settings				Handling of the Order	
Order Floor Destination	Order FloorRoutingInst	Port Default Floor Destination	Port Default FloorRoutingInst	Orders Only Executed on Floor (i.e. complex AON)	All Other Order Types
			E (default)	Reject: ineligible for electronic book	Process electronically
			D	Reject: requires a floor destination	Reject: requires a floor destination
			X	Reject: requires a floor destination	Reject: requires a floor destination
		W001	E (default)	Reject: ineligible for electronic book	Process electronically
		W001	D	Route to floor: W001	Route to floor: W001
		W001	X	Route to floor: W001	Process electronically
W009			E (default)	Reject: ineligible for electronic book	Process electronically
W009		W001	D	Route to floor: W009	Route to floor: W009
W009			X	Route to floor: W009	Process electronically
W009	E			Reject: ineligible for electronic book	Process electronically
W009	D			Route to floor: W009	Route to floor: W009
W009	X			Route to floor: W009	Process electronically
	E			Reject: ineligible for electronic book	Process electronically
	D			Reject: requires a floor destination	Reject: requires a floor destination
	X			Reject: requires a floor destination	Process electronically

**E** = Electronic only

**D** = Direct

**X** = Route to floor if unable to process electronically

#### **1.7.13.1 Floor Representation Restatements (C1 Only)**

Orders routed to the trading floor will be represented to the open outcry crowd before being traded in the crowd. The Cboe BOE protocol provides a mechanism for clients to receive restatement of orders at the time of representation.

BOE Floor Representation Restatements are sent to connected clients for each order when the floor broker reports representation of the order to the crowd. Floor Representation Restatements sent to BOE ports will also be sent to connected Order by Order Drop clients having the *Floor Representation Restatements* port attribute enabled.

Order Restated messages for floor representation will have *RestatementReason* = 'F' (Represented on Floor). The *TransactTime* (60) will be the recorded time of the representation.

#### **1.7.14 Stale NBBO**

A stale NBBO will occur when the Cboe trading system determines that one or more SIP quote channels is impaired or down completely. If the trading system detects that an NBBO is stale new orders for the affected class(es) will be rejected. Any existing orders will remain on the book but will not be allowed to update (user updates or sliding updates). Members will be allowed to cancel any open orders. Regular trading will resume when the NBBO for a given class is determined to be healthy by the Cboe trading system.

## 2 Session

### 2.1 Message Header Fields

Each message has a ten byte header. The two initial *StartOfMessage* bytes are present to aid in message reassembly for network capture purposes. The *MatchingUnit* field is only populated on sequenced, non-session level messages sent from Cboe to the Member. Messages from Member to Cboe and all session level messages must always set this value to 0.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	Message type.
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.  <b>For session level traffic, the unit is set to 0.</b> <b>For messages from Member to Cboe, the unit must be 0.</b>
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Messages from Cboe to Member are sequenced distinctly per matching unit.  Messages from Member to Cboe are sequenced across all matching units with a single sequence stream.  Member can optionally send a 0 sequence number on all messages from Member to Cboe. Cboe highly recommends that Members send sequence numbers on all inbound messages.

### 2.2 Login, Replay and Sequencing

Session level messages, both inbound (Member to Cboe) and outbound (Cboe to Member) are unsequenced.

Inbound (Member to Cboe) application messages are sequenced. Upon reconnection, Cboe informs the Member of the last processed sequence number; the Member may choose to resend any messages with sequence numbers greater than this value. A gap forward in the Member's incoming sequence number is permitted at any time and is ignored by Cboe. Gaps backward in sequence number (including the same sequence number used twice) are never permitted and will always result in a *Logout* message being sent and the connection being dropped.

Most (but not all) outbound (Cboe to Member) application messages are monotonically sequenced per matching unit. Each message's documentation will indicate whether it is sequenced or unsequenced. While matching units on BOE correspond directly to matching units on Multicast PITCH, sequence numbers do not.

Upon reconnection, a Member sends the last received sequence number per matching unit in a *Login Request* message. Cboe will respond with any missed messages. However, when the *NoUnspecifiedUnitReplay* flag is enabled in the *Login Request* message, Cboe will exclude messages from unspecified matching units during replay. Cboe will send a *Replay Complete* message when replay is finished. If there are no messages to replay, a *Replay Complete* message will be sent immediately after a *Login Response* message. Cboe **will reject all orders during replay.**

Assuming a Member has requested replay messages using a properly formatted `Login Request` message after a disconnect, any unacknowledged orders remaining with the Member after the `Replay Complete` message is received should be assumed to be unknown to Cboe.

**Unsequenced messages will not be included during replay.**

A session is identified by the username and session sub-identifier (both supplied by Cboe). Only one concurrent connection per username and session sub-identifier is permitted.

If a login is rejected, an appropriate `Login Response` message will be sent and the connection will be terminated.

## 2.3 Sequence Reset

A reset sequence operation is not available for Binary Order Entry. However, a Member can send a `Login Request` message with `NoUnspecifiedUnitReplay` field enabled, and `NumberOfUnits` field set to zero. Then, upon receiving a `Login Response` message from Cboe, the Member can use the field `LastReceivedSequenceNumber` as the sequence starting point for sending future messages.

## 2.4 Heartbeats

Client Heartbeat messages are sent from Member to Cboe and Server Heartbeat messages are sent from Cboe to Member if no other data has been sent in that direction for one second. Like other session level messages, heartbeats from Cboe to the Member do not increment the sequence number. If Cboe receives no inbound data or heartbeats for 5 seconds, a `Logout` message will be sent and the connection will be terminated. **Members are encouraged to have a one second heartbeat interval and to perform similar connection staleness logic.**

## 2.5 Logging Out

To gracefully log out of a session, a `Logout Request` message should be sent by the Member. Cboe will finish sending any queued data for that port and will then respond with its own `Logout` message and close the connection. After receipt of a `Logout Request` message, Cboe will ignore all other inbound (Member to Cboe) messages except for Client Heartbeat messages.

## 3 Session Messages

### 3.1 Member to Cboe

#### 3.1.1 Login Request Message Fields

A `Login Request` message must be sent as the first message upon connection.

A number of repeating parameter groups, some of which may be required, are sent at the end of the message. Ordering of parameter groups is not important. New parameter groups may be added in the future with no notice.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x37
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	Always 0 for session level messages.
<i>SessionSubID</i>	10	4	Alphanumeric	Session Sub ID supplied by Cboe.
<i>Username</i>	14	4	Alphanumeric	Username supplied by Cboe.
<i>Password</i>	18	10	Alphanumeric	Password supplied by Cboe.
<i>NumberOfParamGroups</i>	28	1	Binary	A number, n (possibly 0), of parameter groups to follow.
<i>ParamGroup<sub>1</sub></i>				First parameter group.
...				
<i>ParamGroup<sub>n</sub></i>				Last parameter group.

#### Unit Sequences Parameter Group

This parameter group includes the last consumed sequence number per matching unit received by the Member. Cboe uses these sequence numbers to determine what outbound (Cboe to Member) traffic, if any, was missed by the Member. If this parameter group is not sent, it's assumed the Member has not received any messages (e.g., start of day).

The Member does not need to include a sequence number for a unit if they have never received messages from it. For example, if the Member has received responses from units 1, 3, and 4, the `Login Request` message need not include unit 2. If the Member wishes to send a value for unit 2 anyway, 0 would be the only allowed value.

Only one instance of this parameter group may be included.

Field	Offset	Length	Data Type	Description
<i>ParamGroupLength</i>	0	2	Binary	Number of bytes for the parameter group, including this field.
<i>ParamGroupType</i>	2	1	Binary	0x80

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<i>NoUnspecifiedUnitReplay</i>	3	1	Binary	Flag indicating whether to replay missed outgoing (Cboe to Member) messages for unspecified units. 0x00 = False (Replay Unspecified Units) 0x01 = True (Suppress Unspecified Units Replay)
<i>NumberOfUnits</i>	4	1	Binary	A number, n (possibly 0), of unit/sequence pairs to follow, one per unit from which the Member has received messages.
<i>UnitNumber<sub>1</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>1</sub></i>		4	Binary	Last received sequence number for the unit.
...				
<i>UnitNumber<sub>n</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>n</sub></i>		4	Binary	Last received sequence number for the unit.

### Return Bitfields Parameter Group

This parameter group, which may be repeated, indicates which attributes of a message will be returned by Cboe for the remainder of the session. This allows Members to tailor the echoed results to the needs of their system without paying for bandwidth or processing they do not need.

Listing of the return bitfields which are permitted per message is contained in Section 7 – Return Bitfields per Message.

Field	Offset	Length	Data Type	Description
<i>ParamGroupLength</i>	0	2	Binary	Number of bytes for the parameter group, including this field.
<i>ParamGroupType</i>	2	1	Binary	0x81
<i>MessageType</i>	3	1	Binary	Return message type for which the bitfields are being specified (e.g., 0x25 for an Order Acknowledgment message).
<i>NumberOfReturnBitfields</i>	4	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sub>1</sub></i>	5	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sub>n</sub></i>		1	Binary	Last bit field.

### **Login Request Message Example**

Note this example is for illustrative purposes only. Actual login messages will contain specification of return bitfields for a larger set messages and each return bitfield specification will be complete whereas the example below is only an illustration for purposes of demonstrating the construction of the Login Request message.

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	3D 00	61 bytes
<i>MessageType</i>	37	Login Request
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	00 00 00 00	Always 0 for session level messages
<i>SessionSubID</i>	30 30 30 31	0001
<i>Username</i>	54 45 53 54	TEST
<i>Password</i>	54 45 53 54 49 4E 47 00 00 00	TESTING
<i>NumberOfParam</i>	03	3 parameter groups
<i>Groups</i>		
<i>ParamGroupLength</i>	0F 00	15 bytes for this parameter group
<i>ParamGroupType</i>	80	0x80 = Unit Sequences
<i>NoUnspecified</i>	01	True (replay only specified units)
<i>UnitReplay</i>		
<i>NumberOfUnits</i>	02	Two unit/sequence pairs to follow;
<i>UnitNumber<sub>1</sub></i>	01	Unit 1
<i>UnitSequence<sub>1</sub></i>	4A BB 01 00	Last received sequence of 113,482
<i>UnitNumber<sub>2</sub></i>	02	Unit 2
<i>UnitSequence<sub>2</sub></i>	00 00 00 00	Last received sequence of 0
<i>ParamGroupLength</i>	08 00	8 bytes for this parameter group
<i>ParamGroupType</i>	81	0x81 = Return Bitfields
<i>MessageType</i>	25	0x25 = Order Acknowledgment
<i>NumberOfReturn</i>	03	3 bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield<sub>1</sub></i>	00	No bitfields from byte 1
<i>ReturnBitfield<sub>2</sub></i>	41	<i>Symbol, Capacity</i>
<i>ReturnBitfield<sub>3</sub></i>	05	<i>Account, ClearingAccount</i>
<i>ParamGroupLength</i>	0B 00	11 bytes for this parameter group
<i>ParamGroupType</i>	81	0x81 = Return Bitfields
<i>MessageType</i>	2C	0x2C = Order Execution
<i>NumberOfReturn</i>	06	6 bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield<sub>1</sub></i>	00	No bitfields from byte 1
<i>ReturnBitfield<sub>2</sub></i>	41	<i>Symbol, Capacity</i>
<i>ReturnBitfield<sub>3</sub></i>	07	<i>Account, ClearingFirm, ClearingAccount</i>
<i>ReturnBitfield<sub>4</sub></i>	00	No bitfields from byte 4
<i>ReturnBitfield<sub>5</sub></i>	40	<i>BaseLiquidityIndicator</i>
<i>ReturnBitfield<sub>6</sub></i>	00	No bitfields from byte 6

### 3.1.2 Logout Request Message Fields

To end the session, the Member should send a `Logout Request` message. Cboe will finish sending any queued data and finally respond with a `Logout` message and close the connection.

A Member may simply close the connection without logging out, but may lose any queued messages by doing so.

Field	Offset	Length	Data Type	Description
<code>StartOfMessage</code>	0	2	Binary	Must be 0xBA 0xBA.
<code>MessageLength</code>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <code>StartOfMessage</code> field.
<code>MessageType</code>	4	1	Binary	0x02
<code>MatchingUnit</code>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<code>SequenceNumber</code>	6	4	Binary	Always 0 for session level messages.

#### Logout Request Message Example

Field Name	Hexadecimal	Notes
<code>StartOfMessage</code>	BA BA	Start of message bytes.
<code>MessageLength</code>	08 00	8 bytes
<code>MessageType</code>	02	Logout Request
<code>MatchingUnit</code>	00	Always 0 for inbound messages
<code>SequenceNumber</code>	00 00 00 00	Always 0 for session level messages

### 3.1.3 Client Heartbeat Message Fields

See Section 2.4 – Heartbeats for more information about heartbeats and the session level protocol.

Field	Offset	Length	Data Type	Description
<code>StartOfMessage</code>	0	2	Binary	Must be 0xBA 0xBA.
<code>MessageLength</code>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <code>StartOfMessage</code> field.
<code>MessageType</code>	4	1	Binary	0x03
<code>MatchingUnit</code>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<code>SequenceNumber</code>	6	4	Binary	Always 0 for session level messages.

#### Client Heartbeat Message Example

Field Name	Hexadecimal	Notes
<code>StartOfMessage</code>	BA BA	Start of message bytes.
<code>MessageLength</code>	08 00	8 bytes
<code>MessageType</code>	03	Client Heartbeat
<code>MatchingUnit</code>	00	Always 0 for inbound messages
<code>SequenceNumber</code>	00 00 00 00	Always 0 for session level messages

## 3.2 Cboe to Member

### 3.2.1 Login Response Message Fields

A Login Response message is sent in response to a Login Request message. On a successful login, the *LoginResponseStatus* will be set to 'A'. On a failed login, *LoginResponseStatus* will be set to a value other than 'A', and *LoginResponseText* will be set to an appropriate failure description. The length of the *LoginResponse* will vary depending on acceptance or rejection of the *LoginRequest* and the parameter groups included on the *LoginResponse*. Customers should be prepared to handle variable length *LoginResponse* messages.

**Cboe will verify Return Bitfields at login time.** If the Return Bitfields in a Return Bitfields Parameter Group are invalid, *LoginResponseStatus* will be set to 'F', and *LoginResponseText* will include a description of which byte and bit are invalid. This is done to ensure that reserved fields are not used, and only options that apply to the local market are set. See Section 6 – Return Bitfields Per Message for additional information.

Note that two sets of sequence numbers are available on the Login Response message. The set of sequence numbers in the body are the actual Cboe to Member sequence numbers indicating the highest sequence numbers available per matching unit. If specified during login, the Unit Sequences Parameter Group will be returned as an echo of the sequence numbers the Member presented during login as the highest received. If the sequence numbers are different, the gap will be filled by Cboe during the replay. A subset of units can be provided in the Login Request message; however, all units will be provided in the Login Response message.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x24
<i>MatchingUnit</i>	5	1	Binary	Always 0 for session level messages.
<i>SequenceNumber</i>	6	4	Binary	Always 0 for session level messages.
<i>LoginResponseStatus</i>	10	1	Alphanumeric	Accepted, or the reason for the rejection.  A = Login Accepted N = Not authorized (invalid username/password) D = Session is disabled B = Session in use S = Invalid session Q = Sequence ahead in Login message I = Invalid unit given in Login message F = Invalid return bit field in login message M = Invalid Login Request message structure
<i>LoginResponseText</i>	11	60	Text	Human-readable text with additional information about the reason for rejection. ASCII NUL (0x00) filled on the right, if necessary.
<i>NoUnspecifiedUnitReplay</i>	71	1	Binary	Echoed back from the original Login Request message.
<i>LastReceivedSequenceNumber</i>	72	4	Binary	Last inbound (Member to Cboe) message sequence number processed by Cboe.
<i>NumberOfUnits</i>	76	1	Binary	A number, n, of unit/sequence pairs to follow, one per unit. A pair for every unit will be sent, even if no messages have been sent to this port today. For unsuccessful logins, this will be 0.
<i>UnitNumber<sub>1</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>1</sub></i>		4	Binary	Highest available Cboe to Member sequence number for the unit.

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...				
<i>UnitNumber<sub>n</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>n</sub></i>		4	Binary	Highest available Cboe to Member sequence number for the unit.
<i>NumberOfParam Groups</i>		1	Binary	Echoed back from the original Login Request message.
<i>ParamGroup<sub>1</sub></i>				Echoed back from the original Login Request message.
...				
<i>ParamGroup<sub>n</sub></i>				Echoed back from the original Login Request message.

### **Login Response Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	88 00	136 bytes
<i>MessageType</i>	24	Login Response
<i>MatchingUnit</i>	00	Always 0 for session messages
<i>SequenceNumber</i>	00 00 00 00	Always 0 for session level messages
<i>LoginResponseStatus</i>	41	A = Login Accepted
<i>LoginResponseText</i>	41 63 63 65 70 74 65 64 00	Accepted (padding) (padding) (padding) (padding) (padding)
<i>NoUnspecified</i>	01	True (replay only specified units)
<i>UnitReplay</i>		
<i>Last Received</i>	54 4A 02 00	Last sequence Cboe received of 150,100
<i>Sequence Number</i>		
<i>NumberOfUnits</i>	04	Four unit/sequence pairs to follow;
<i>UnitNumber 1</i>	01	Unit 1
<i>UnitSequence1</i>	4A BB 01 00	Actual last sequence of 113,482
<i>UnitNumber 2</i>	02	Unit 2
<i>UnitSequence2</i>	00 00 00 00	Actual last sequence of 0
<i>UnitNumber 3</i>	02	Unit 3
<i>UnitSequence3</i>	00 00 00 00	Actual last sequence of 0
<i>UnitNumber 4</i>	02	Unit 4
<i>UnitSequence4</i>	79 A1 00 00	Actual last sequence of 41,337
<i>NumberOfParam Groups</i>	03	3 parameter groups
<i>ParamGroupLength</i>	14 00	20 bytes for this parameter group
<i>ParamGroupType</i>	80	0x80 = Unit Sequences
<i>NoUnspecified</i>	01	True (replay unspecified units)
<i>UnitReplay</i>		
<i>NumberOfUnits</i>	03	Three unit/sequence pairs to follow;
<i>UnitNumber 1</i>	01	Unit 1
<i>UnitSequence1</i>	4A BB 01 00	Last received sequence of 113,482
<i>UnitNumber 2</i>	02	Unit 2
<i>UnitSequence2</i>	00 00 00 00	Last received sequence of 0

<i>UnitNumber</i>	3	04	Unit 4
<i>UnitSequence3</i>		79 A1 00 00	Last received sequence of 41,337
<i>ParamGroupLength</i>		08 00	8 bytes for this parameter group
<i>ParamGroupType</i>		81	0x81 = Return Bitfields
<i>MessageType</i>		25	0x25 = Order Acknowledgment
<i>NumberOfReturn</i>		03	3 bitfields to follow
<i>Bitfields</i>			
<i>ReturnBitfield1</i>		00	No bitfields from byte 1
<i>ReturnBitfield2</i>		41	<i>Symbol, Capacity</i>
<i>ReturnBitfield3</i>		05	<i>Account, ClearingAccount</i>
<i>ParamGroupLength</i>		0C 00	12 bytes for this parameter group
<i>ParamGroupType</i>		81	0x81 = Return Bitfields
<i>MessageType</i>		2C	0x2C = Order Execution
<i>NumberOfReturn</i>		07	7 bitfields to follow
<i>Bitfields</i>			
<i>ReturnBitfield1</i>		00	No bitfields from byte 1
<i>ReturnBitfield2</i>		41	<i>Symbol, Capacity</i>
<i>ReturnBitfield3</i>		07	<i>Account, ClearingFirm, ClearingAccount</i>
<i>ReturnBitfield4</i>		00	No bitfields from byte 4
<i>ReturnBitfield5</i>		40	<i>BaseLiquidityIndicator</i>
<i>ReturnBitfield6</i>		00	No bitfields from byte 6
<i>ReturnBitfield7</i>		01	<i>SubLiquidityIndicator</i>

### 3.2.2 Logout Message Fields

A `Logout` message is usually sent in response to a `Logout Request` message. Any queued data is transmitted, a `Logout` message is sent, and Cboe will close the connection. However, a `Logout` message may also be sent if the Member violates the protocol specification (e.g., by moving backwards in sequence number).

A `Logout` message is also sent for any ports that are connected when the Cboe Options Exchanges shut down. The shut down time for Cboe Options Exchanges is variable each day but is scheduled to occur at 17:30 ET. The message is sent without first receiving a logout request from the Member. The message contains `LogoutReason` = 'E' for End of Day.

The `Logout` message contains the last transmitted sequence number for each unit, allowing the Member to check that their last received sequence number matches.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <code>StartOfMessage</code> field.
<i>MessageType</i>	4	1	Binary	0x08
<i>MatchingUnit</i>	5	1	Binary	Always 0 for session level messages.
<i>SequenceNumber</i>	6	4	Binary	Always 0 for session level messages.
<i>LogoutReason</i>	10	1	Alphanumeric	The reason why the Logout message was sent. U = User Requested E = End of Day A = Administrative ! = Protocol Violation
<i>LogoutReasonText</i>	11	60	Text	Human-readable text with additional information about the reason for logout. Particularly useful if <code>LogoutReason</code> = ! (Protocol Violation).
<i>LastReceivedSequenceNumber</i>	71	4	Binary	Last inbound (Member to Cboe) message sequence number processed by Cboe.

<i>NumberOfUnits</i>	75	1	Binary	A number, $n$ (possibly 0), of unit/sequence pairs to follow, one per unit from which the client has received messages.
<i>UnitNumber<sub>1</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>1</sub></i>		4	Binary	Highest available sequence number for the unit.
...				
<i>UnitNumber<sub>n</sub></i>		1	Binary	A unit number.
<i>UnitSequence<sub>n</sub></i>		4	Binary	Highest available sequence number for the unit.

### Logout Response Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	55 00	85 bytes
<i>MessageType</i>	08	Logout
<i>MatchingUnit</i>	00	Always 0 for session level messages
<i>SequenceNumber</i>	00 00 00 00	Always 0 for session level messages
<i>LogoutReason</i>	55	U = User Requested
<i>LogoutReasonText</i>	55 73 65 72 00	User
<i>LastReceived</i>	54 5A 02 00	Last Cboe received sequence of 150,100
<i>SequenceNumber</i>		
<i>NumberOfUnits</i>	02	Two unit/sequence pairs to follow;
<i>UnitNumber<sub>1</sub></i>	01	Unit 1
<i>UnitSequence<sub>1</sub></i>	4A BB 01 00	Last sent sequence of 113,482
<i>UnitNumber<sub>2</sub></i>	02	Unit 2
<i>UnitSequence<sub>2</sub></i>	00 00 00 00	Last sent sequence of 0

### 3.2.3 Server Heartbeat Message Fields

See Section 2.4 – Heartbeats for more information about heartbeats and the session level protocol.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x09
<i>MatchingUnit</i>	5	1	Binary	Always 0 for session level messages.
<i>SequenceNumber</i>	6	4	Binary	Always 0 for session level messages.

### Server Heartbeat Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	08 00	8 bytes
<i>MessageType</i>	09	Server Heartbeat

<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	00 00 00 00	Always 0 for session level messages

### 3.2.4 Replay Complete Message Fields

See Section 2.2 – Login, Replay and Sequencing for more information on Login, sequencing and replay.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x13
<i>MatchingUnit</i>	5	1	Binary	Always 0 for session level messages.
<i>SequenceNumber</i>	6	4	Binary	Always 0 for session level messages.

#### Replay Complete Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	08 00	8 bytes
<i>MessageType</i>	13	Replay Complete
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	00 00 00 00	Always 0 for session level messages

## 4 Application Messages

### 4.1 Member to Cboe

#### 4.1.1 New Order Message Fields

A New Order message consists of a number of required fields followed by a number of optional fields. The optional fields used are specified by setting bits in the *NewOrderBitfields*. Fields must be appended at the end of the message, starting with the lowest order enabled bit in the first bit field first.

Permitted input optional fields are described in Section 5.1 – New Order.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x38
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>CIOrdID</i>	10	20	Text	<p>Corresponds to <i>CIOrdID</i> (11) in Cboe FIX.</p> <p>ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the ‘at’ symbol (@) and double quotes.</p> <p>If the <i>CIOrdID</i> matches a live order, the order will be rejected as duplicate.</p> <p>Note: Cboe only enforces uniqueness of <i>CIOrdID</i> values among currently live orders, which includes long-lived, persisting GTC/GTD orders. However, we strongly recommend that you keep your <i>CIOrdID</i> values unique.</p>
<i>Side</i>	30	1	Alphanumeric	<p>Corresponds to <i>Side</i> (54) in Cboe FIX.</p> <p>1 = Buy 2 = Sell</p>
<i>OrderQty</i>	31	4	Binary	<p>Corresponds to <i>OrderQty</i> (38) in Cboe FIX.</p> <p>Order quantity. System limit is 999,999 contracts.</p>
<i>NumberOfNewOrderBitfields</i>	35	1	Binary	Bitfield identifying which bitfields are set. Field values must be appended to the end of the message.
<i>NewOrderBitfield<sup>1</sup></i>	36	1	Binary	Bitfield identifying fields to follow.
....				
<i>NewOrderBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Required Order Attributes:

The following are required to be sent on new orders:

- Some form of symbology (see **Symbology** below);
- *Price* (limit orders) or *Price* and/or *OrdType* (limit or market orders. Note market and stop/stop limit orders are not supported during GTH or Curb sessions); and,
- *Capacity*;

All price fields (*Price*, *StopPx*) must be entered as non-negative values.

All other values have defaults. See the table in **List of Options Fields** for additional information about each optional field, including its default value.

#### Symbology:

For additional information, refer to the Cboe US Equity and Options Symbology Reference.

### New Order Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	59 00	89 bytes
<i>MessageType</i>	38	New Order
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>CIOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Side</i>	31	Buy
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>NumberOfNewOrder Bitfields</i>	04	Four bitfields to follow
<i>NewOrderBitfield1</i>	04	<i>Price</i>
<i>NewOrderBitfield2</i>	C1	<i>Symbol</i> , <i>Capacity</i> , <i>RoutingInst</i>
<i>NewOrderBitfield3</i>	01	<i>Account</i>
<i>NewOrderBitfield4</i>	17	<i>MaturityDate</i> , <i>StrikePrice</i> , <i>PutOrCall</i> , <i>OpenClose</i>
<i>Price</i>	70 17 00 00 00 00 00 00	0.60
<i>Symbol</i>	4D 53 46 54 00 00 00 00	MSFT
<i>Capacity</i>	43	C = Customer
<i>RoutingInst</i>	52 00 00 00	R = Routable
<i>Account</i>	44 45 46 47 00 00 00 00 00 00 00 00 00 00 00 00	DEFG
<i>MaturityDate</i>	EF DB 32 01	2011-03-19
<i>StrikePrice</i>	98 AB 02 00 00 00 00 00	17.50
<i>PutOrCall</i>	31	1 = Call
<i>OpenClose</i>	4F	O = Open

### 4.1.2 New Order Cross Message Fields (C1 and EDGX Only)

A New Order Cross message contains the details for both the agency (initiating) and contra side(s) of a cross order (such as an AIM order). The message consists of a number of required fields including *Symbol*, *Price*, *OrderQty*, and relevant clearing information for all parties, as well as a number of optional fields.

The first order in the list is the agency order, while the rest are contra side responses. There is a maximum of ten (10) contra-parties that can be supplied with the order, for a total of eleven (11) repeating groups, as described below.

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In each repeating group, the *Side*, *AllocQty*, *CIOrdID*, *Capacity*, *OpenClose*, and *ClearingFirm* are always required. Beyond that, the bits in the *NewOrderCrossBitfields* control which fields are expected. Any fields that are specified in *NewOrderCrossBitfields* that appear in the repeating groups should not be supplied in the optional fields that come after the repeating groups.

Permitted input optional fields are described in Section 5.2 – New Order Cross.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x41
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>CrossID</i>	10	20	Text	Corresponds to <i>CrossID</i> (548) in Cboe FIX.  Day-unique identifier for the cross order chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the ‘at’ symbol and double quotes.
<i>CrossType</i>	30	1	Alphanumeric	Corresponds to <i>CrossType</i> (549) in Cboe FIX.  Type of auction order being submitted. This indicates the type of auction that will be initiated upon order entry.  1 = Automated Improvement Mechanism (AIM) 2 = Qualified Contingent Cross (QCC) 3 = Solicitation Cross (SAM) 4 = Position Compression Cross (PCC) <b>(C1 Only)</b>
<i>CrossPrioritization</i>	31	1	Alphanumeric	Corresponds to <i>CrossPrioritization</i> (550) in Cboe FIX.  Indicates which side of the cross order will be prioritized for execution. This identifies the Agency side.  1 = Buy 2 = Sell
<i>Price</i>	32	8	Binary Price	Corresponds to <i>Price</i> (44) in Cboe FIX.  Auction Price. Must be non-negative.
<i>OrderQty</i>	40	4	Binary	Corresponds to <i>OrderQty</i> (38) in Cboe FIX.  Order quantity. System limit is 999,999 contracts.
<i>NumberOfNewOrderCrossBitfields</i>	44	1	Binary	Bitfield identifying which bitfields are set
<i>NewOrderCrossBitfield<sup>1</sup></i>	45	1	Binary	Bitfield identifying fields to follow.
....				
<i>NewOrderCrossBitfield<sup>n</sup></i>		1	Binary	<i>Last bitfield.</i>
<i>GroupCnt</i>		2	Binary	Number of order allocations represented by repeating groups included in this cross order. Must be at least 2 (One agency and one contra), and no more than 11.

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<i>Repeating Groups of...</i>				
<i>Side</i>		1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX.  1 = Buy 2 = Sell
<i>AllocQty</i>		4	Binary	Corresponds to <i>AllocQty</i> (80) in Cboe FIX.  Number of contracts for this party.
<i>ClOrdID</i>		20	Text	Corresponds to <i>ClOrdID</i> (11) in Cboe FIX.  Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the ‘at’ symbol and double quotes.  If the <i>ClOrdID</i> matches a live order, the order will be rejected as duplicate.  <b>Note: Cboe only enforces uniqueness of <i>ClOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>ClOrdID</i> values day-unique.</b>
<i>Capacity</i>		1	Alpha	Corresponds to <i>OrderCapacity</i> (47) in Cboe FIX.  C = Customer M = Market Maker F = Firm U = Professional Customer N = AwayMarket Maker B = Broker-Dealer J = Joint Back Office
<i>OpenClose</i>		1	Alphanumeric	Corresponds to <i>OpenClose</i> (77) in Cboe FIX.  Indicates status of client position in the option leg.  O = Open C = Close N = None*  *Option legs with <i>Capacity</i> = ‘M’ or ‘N’ will not be required to specify <i>OpenClose</i> on their legs or may optionally specify a value of ‘N’, unless the series is limited to closing only.  If the leg is limited to closing only transactions, only <i>Capacity</i> = ‘M’ will be permitted to submit <i>OpenClose</i> = ‘O’ if the order has <i>TimeInForce</i> = ‘3’ (IOC) and <i>RoutingInst</i> = ‘B’, or the order has a <i>RoutingInst</i> = ‘P’.  An Open position cannot trade with an Open position for series limited to Closing Only transactions, even if the inbound IOC from the aggressing market maker is sent with that combination of tags.
<i>GiveUpFirmID</i>		4	Alpha	Corresponds to <i>GiveUpFirmID</i> (9946) in Cboe FIX. EFID that will clear the trade.
<i>Account (Optional)</i>		16	Text	See <b>List of Optional Fields</b> .
<i>CMTANumber (Optional)</i>		4	Binary	See <b>List of Optional Fields</b> .

<i>ClearingAccount (Optional)</i>		4	Text	See <a href="#">List of Optional Fields</a> .
<i>ClearingOptionalData(Optional)</i>		16	Text	See <a href="#">List of Optional Fields</a> .
<i>FrequentTraderID (Optional)</i>		6	Text	See <a href="#">List of Optional Fields</a> .
<i>Optional fields...</i>				Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

#### Required Order Attributes:

- Some form of symbology (see **Symbology** below)
- Agency order's *Side* must match the cross order's *CrossPrioritization*
- Each contra-party allocation must have the opposite *Side*
- Each side's cumulative *AllocQty* must equal the cross order's *OrderQty*

#### Symbology:

For additional information, refer to the Cboe US Equity and Options Symbology Reference.

#### New Order Cross Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	B0 00	176 bytes
<i>MessageType</i>	41	New Order Cross
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>CrossID</i>	4E 5A 31 56 37 42 4A 5F 41 63 63 65 70 74 42 75 79 00 00 00	NZ1V7BJ_AcceptBuy
<i>CrossType</i>	31	1 = AIM Order
<i>CrossPrioritization</i>	31	1 = Agency Buy
<i>Price</i>	20 4E 00 00 00 00 00 00	\$2.00
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>NumberOfNewOrderCross</i>	02	Two bitfields to follow
<i>Bitfields</i>		
<i>NewOrderCrossBitfield1</i>	41	<i>Symbol, TargetPartyID</i>
<i>NewOrderCrossBitfield2</i>	30	<i>CMTANumber, ClearingAccount</i>
<i>GroupCnt</i>	03 00	Three repeating groups to follow
<i>Side</i>	31	1 = Buy
<i>AllocQty</i>	64 00 00 00	100 contracts
<i>ClOrdID</i>	51 4C 37 53 5A 37 43 5F 61 67 65 6E 63 79 00 00 00 00 00 00	QL7SZ7C_agency
<i>Capacity</i>	43	C = Customer
<i>OpenClose</i>	43	C = Close
<i>GiveUpFirmID</i>	44 45 46 47	DEFG
<i>CMTANumber</i>	00 00 00 00	No <i>CMTANumber</i> for this order
<i>ClearingAccount</i>	00 00 00 00	No <i>ClearingAccount</i> for this order
<i>Side</i>	32	2 = Sell
<i>AllocQty</i>	28 00 00 00	40 contracts
<i>ClOrdID</i>	51 4C 39 4B 38 55 56 5F 63 6F 6E 74 72 61 31 00 00 00 00 00	QL9K8UV_contra1
<i>Capacity</i>	46	F = Firm

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<i>OpenClose</i>	4F	O = Open
<i>GiveUpFirmID</i>	41 42 43 44	ABCD
<i>CMTANumber</i>	27 02 00 00	551
<i>ClearingAccount</i>	57 58 59 5A	WXYZ
<i>Side</i>	32	2 = Sell
<i>AllocQty</i>	3C 00 00 00	60 contracts
<i>ClOrdID</i>	51 4C 39 54 35 59 44 5F 63 6F 6E 74 72 61 32 00 00 00 00 00	QL9T5YD_contra2
<i>Capacity</i>	46	F = Firm
<i>OpenClose</i>	4F	O = Open
<i>GiveUpFirmID</i>	41 42 43 44	ABCD
<i>CMTANumber</i>	7B 00 00 00	123
<i>ClearingAccount</i>	57 58 59 5A	WXYZ
<i>Symbol</i>	30 30 51 30 6B 41 00 00	00Q0kA
<i>Target Party ID</i>	43 44 45 46	CDEF

#### 4.1.3 New Complex Order Message Fields (C1, EDGX, and C2 Only)

A New Complex Order message contains the details required to enter an order on a complex instrument created with previously entered New Complex Instrument message request. The message is similar to a New Order message with an additional repeating group of the positions for each leg. The positions must be in the order returned by the system in the Complex Instrument Accepted message response, not the order supplied in the New Complex Instrument message request. Complex orders in cross product spreads (ie SPX/SPXW, IWM/RUT, DIA/DJX, VIX/VXX, MNX/NDX) where the products do not operate on the same matching unit cannot leg into the simple book.

Permitted input optional fields are described in Section 5.3 – New Complex Order.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x4B
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>ClOrdID</i>	10	20	Text	Corresponds to <i>ClOrdID</i> (11) in Cboe FIX.  ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, and pipe.  If the <i>ClOrdID</i> matches a live order, the order will be rejected as duplicate.  Note: Cboe only enforces uniqueness of <i>ClOrdID</i> values among currently live orders, which includes long-lived, persisting GTC/GTD orders. However, we strongly recommend that you keep your <i>ClOrdID</i> values unique.
<i>Side</i>	30	1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX.  1 = Buy 2 = Sell

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<i>OrderQty</i>	31	4	Binary	Corresponds to <i>OrderQty</i> (38) in Cboe FIX. Order quantity. System limit is 999,999 contracts.
<i>NumberOfNewComplexOrderBitfields</i>	35	1	Binary	Bitfield identifying which bitfields are set. Field values must be appended to the end of the message.
<i>NewComplexOrderBitfield<sup>1</sup></i>	36	1	Binary	Bitfield identifying fields to follow.
....				
<i>NewComplexOrderBitfield<sup>n</sup></i>		1	Binary	Last bitfield.

Repeating Group *ComplexLegOrderInfo* must occur the number of times specified in *NoLegs*. Each field occurs in each group, in order as shown below. Optional fields occur only if corresponding bits in bitfields are set.

<i>LegPositionEffect</i>	1	Alphanumeric	Corresponds to <i>LegPositionEffect</i> (564) in Cboe FIX.  Indicates status of client position in option for this leg.  O = Open C = Close N = None*
.			*Only Orders with an <i>OrderCapacity</i> of 'M' or 'N' will be allowed to specify 'N' for <i>LegPositionEffect</i> .  If the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B'.

<i>Optional fields...</i>			Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.
---------------------------	--	--	--

### Required Order Attributes:

The following are required to be sent:

- *Symbol*
- *Price* only (limit orders) or *Price* and/or *OrdType* (limit or market orders. Note market and stop/stop limit orders are not supported during GTH or Curb sessions); and,
- *Capacity*
- *LegPositionEffect*

All other values have defaults. See the table in **List of Options Fields** for additional information about each optional field, including its default value.

See the Cboe US Equities and Options Symbology Reference for information on symbology.

### New Complex Order Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	4D 00	77 bytes

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<i>MessageType</i>	4B	New Complex Order
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Side</i>	31	Buy
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>NumberOfNewOrder Bitfields</i>	02	Two bitfields to follow
<i>NewOrderBitfield1</i>	E4	<i>Price, Symbol, Capacity, RoutingInst</i>
<i>NewOrderBitfield2</i>	01	<i>Account</i>
<i>NoLegs</i>	03	<i>Three legs</i>
<i>LegPositionEffect</i>	4F	O = Open
<i>LegPositionEffect</i>	4F	O = Open
<i>LegPositionEffect</i>	4F	O = Open
<i>Price</i>	38 FF FF FF FF FF FF FF	-0.02
<i>Symbol</i>	30 30 30 30 43 31 00 00	0000C1
<i>Capacity</i>	43	C = Customer
<i>RoutingInst</i>	42 00 00 00	B = Book only, COA eligible
<i>Account</i>	44 45 46 47 00 00 00 00 00 00 00 00 00 00 00 00	DEFG

#### 4.1.4 New Order Cross Multileg Message Fields (C1 and EDGX Only)

A New Order Cross Multileg message contains the details for both the agency (initiating) and contra side(s) of a cross order (such as an AIM order). The two-sided order consists of a number of required fields including *Symbol*, *Price*, *OrderQty*, and relevant clearing information for both the agency and contra sides, as well as a number of optional fields. A maximum of ten (10) contra-parties will be accepted per order.

Cross Order Acknowledgement, Cross Order Rejected, and Cross Order Cancelled message types will be used by the Exchange to respond to New Order Cross Multileg messages.

Permitted input optional fields are described in Section 5.4 – New Order Cross Multileg.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x5A
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>CrossID</i>	10	20	Text	Corresponds to <i>CrossID</i> (548) in Cboe FIX.  Day-unique identifier for the cross order chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes will not be allowed.
<i>CrossType</i>	30	1	Alphanumeric	Corresponds to <i>CrossType</i> (549) in Cboe FIX.  Type of auction order being submitted. This indicates the type of auction that will be initiated upon order entry.

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				<p>1 = Automated Improvement Mechanism (AIM)      2 = Qualified Contingent Cross (QCC)      3 = Solicitation Cross (SAM)      4 = Position Compression Cross (PCC)<sup>1</sup>  <span style="background-color: #00FFFF; color: black;">(C1 Only)</span>      5 = Related Futures Cross (RFC) <span style="background-color: #00FFFF; color: black;">(C1 Only)</span></p> <p><sup>1</sup> Entry of SPX versus SPXW as a complex spread is not supported for PCC.</p>
<i>CrossPrioritization</i>	31	1	Alphanumeric	<p>Corresponds to <i>CrossPrioritization</i> (550) in Cboe FIX.</p> <p>Indicates which side of the cross multileg order will be prioritized for execution. This identifies the Agency side.</p> <p>1 = Buy      2 = Sell</p>
<i>Price</i>	32	8	Binary Price	Corresponds to <i>Price</i> (44) in Cboe FIX. Auction Price.
<i>OrderQty</i>	40	4	Binary	Corresponds to <i>OrderQty</i> (38) in Cboe FIX.  Order quantity. System limit is 999,999 contracts.
<i>NumberOfNewOrderCrossMultilegBitfields</i>	44	1	Bit Field	Bitfield identifying which bitfields are set.
<i>NewOrderCrossMultilegBitfield<sup>1</sup></i>	45	1	Bit Field	Bitfield identifying fields to follow.
....				
<i>NewOrderCrossMultilegBitfield<sup>n</sup></i>		1	Bit Field	Last <i>bitfield</i> .
<i>GroupCnt</i>		2	Binary	Number of order allocations represented by repeating groups included in this cross order. Must be at least 2 (One agency and one contra), and no more than 11.
<i>Repeating Groups of...</i>				
<i>Side</i>		1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX.  1 = Buy 2 = Sell
<i>AllocQty</i>		4	Binary	Corresponds to <i>AllocQty</i> (80) in Cboe FIX.  Number of contracts for this party.
<i>ClOrdID</i>		20	Text	<p>Corresponds to <i>ClOrdID</i> (11) in Cboe FIX.</p> <p>Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes.</p> <p>If the <i>ClOrdID</i> matches a live order, the order will be rejected as duplicate.</p> <p><b>Note: Cboe only enforces uniqueness of</b></p>

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				<b><i>CIOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>CIOrdID</i> values day-unique.</b>
<i>Capacity</i>		1	Alpha	Corresponds to <i>OrderCapacity</i> (47) in Cboe FIX.  C = Customer M = Market Maker F = Firm U = Professional Customer N = Away Market Maker B = Broker-Dealer J = Joint Back Office L = Non-Trading Permit Holder Affiliate
<i>GiveUpFirmID</i>		4	Alpha	Corresponds to <i>GiveUpFirmID</i> (9946) in Cboe FIX. EFID that will clear the trade.
<i>LegPositionEffects</i>		12	Alpha	Indicates status of the client position in the option for each complex option leg. This value String of characters 'O', 'C', and 'N', equal in length to the number of option legs of the instrument. If an equity leg is present it will always be the last leg, and the position effect must be set to 'N'.  This field can be used for complex instruments with up to 12 legs. For more than 12 legs fill this field with spaces (0x20) and use the optional <i>LegPositionEffectsExt</i> field.  O = Open C = Close N = None*
				*Orders with <i>Capacity</i> = 'M' or 'N' will not be required to specify a position effect on their orders or may specify a value of 'N'. A <blank> will be sent to OCC.  If the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B'.
<i>Account (Optional)</i>		16	Text	See <a href="#">List of Optional Fields</a> .
<i>CMTANumber (Optional)</i>		4	Binary	See <a href="#">List of Optional Fields</a> .
<i>ClearingAccount (Optional)</i>		4	Text	See <a href="#">List of Optional Fields</a> .
<i>ClearingOptionalData (Optional)</i>		16	Text	See <a href="#">List of Optional Fields</a> .
<i>EquityPartyId (Optional)</i>		4	Alpha	See <a href="#">List of Optional Fields</a> .
<i>EquityLegShortSell (Optional)</i>		1	Alpha	See <a href="#">List of Optional Fields</a> .
<i>FrequentTraderID (Optional)</i>		6	Text	See <a href="#">List of Optional Fields</a> .
<i>LegPositionEffectsExt (Optional)</i>		16	Alpha	See <a href="#">List of Optional Fields</a> .

*Optional fields. . .*

Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

## Required Order Attributes:

- Some form of symbology (see **Symbology** below)
  - Agency order's *Side* must match the cross order's *CrossPrioritization*
  - Each contra-party allocation must have the opposite *Side*
  - Each side's cumulative *AllocQty* must equal the cross order's *OrderQty*

## **New Order Cross Multileg Message Example**

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<i>AllocQty</i>	28 00 00 00	40 contracts
<i>ClOrdID</i>	51 4C 39 4B 38 55 56 5F 63 6F 6E 74 72 61 31 00 00 00 00 00	QL9K8UV_contra1
<i>Capacity</i>	46	F = Firm
<i>GiveUpFirmID</i>	41 42 43 44	ABCD
<i>LegPositionEffects</i>	20 20 20 20 20 20 20 20 20 20 20 20	Not used when there are more than 12 legs
<i>CMTANumber</i>	27 02 00 00	551
<i>ClearingAccount</i>	57 58 59 5A	WXYZ
<i>LegPositionEffectsExt</i>	4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F 4F	oooooooooooooooo - Instrument has 16 legs, Open on all legs
<i>Side</i>	32	2 = Sell
<i>AllocQty</i>	3C 00 00 00	60 contracts
<i>ClOrdID</i>	51 4C 39 54 35 59 44 5F 63 6F 6E 74 72 61 32 00 00 00 00 00	QL9T5YD_contra2
<i>Capacity</i>	46	F = Firm
<i>GiveUpFirmID</i>	41 42 43 44	ABCD
<i>LegPositionEffects</i>	20 20 20 20 20 20 20 20 20 20 20 20	Not used when there are more than 12 legs
<i>CMTANumber</i>	7B 00 00 00	123
<i>ClearingAccount</i>	57 58 59 5A	WXYZ
<i>LegPositionEffectsExt</i>	43 43 43 43 43 43 43 43 43 43 43 43 43 43 43 43	CCCCCCCCCC - Instrument has 16 legs, Csoe on all legs
<i>Symbol</i>	30 30 51 30 6B 41 00 00	00Q0kA
<i>Target Party ID</i>	43 44 45 46	CDEF
<i>AttributedQuote</i>	5A	Z = Attribute EFID and Client ID
<i>ClientID</i>	52 32 44 32	R2D2

#### 4.1.5 Cancel Order Message Fields

Request to cancel either a single order or mass cancellation of a group of orders. Note that this does not apply to open orders across multiple sessions.

A single order cancellation references the *ClOrdID* from a previous order (*OrigClOrdID* field). An Order Cancel Request message cannot be used to cancel a single quote, referencing a previous *OrderID* from a quote will be rejected.

Cancel Order messages for GTC and GTD orders may continue to be issued anytime after the trading session ends. All other order message types received after the market closes will be rejected. See Cancellation of Carried Orders Between Trading Sessions for more details on when orders are allowed to be cancelled following the close of trading.

Mass cancellation of a group of orders can be done with the *MassCancelInst* optional field.

- Specify the *MassCancelInst* optional field.
- Specify the *ClearingFirm* field, optionally the *RiskRoot* field, and optionally *MassCancelId* if the Acknowledgement Style is set to 'S' or 'B'.
- Risk lockout is optionally specified using the *MassCancelInst* field.
- EFID values specified in *OnBehalfOfCompld* that are not allowed to clear for the firm will be rejected.

When specifying the *RiskRoot* field, using the underlying symbol is strongly recommended. Mass cancellations are always performed at the risk root (underlying) level.

The system limits the rate at which identical Mass Cancel requests can be submitted to the system. Requests are restricted to ten (10) messages per second per port.

An identical Mass Cancel message is defined as a message having all of the same *CustomGroupID*, *Symbol*, *Clearing Firm*, *Lockout Instruction*, *Instrument Type Filter* and *GTC Order Filter* field values, as a previously received message.

All Members that send mass cancellations **must** include the *SendTime* field. This is required to ensure that a valid cancellation send time is captured and reported to the CAT.

Permitted input optional fields are described in Section 5.5 – Cancel Order.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x39
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>OrigClOrdID</i>	10	20	Text	Corresponds to <i>OrigClOrdID</i> (41) in Cboe FIX. <i>ClOrdID</i> of the order to cancel. For mass cancel requests, must be empty (all zeroes).
<i>NumberOfCancelOrderBitfields</i>	30	1	Binary	Bitfield identifying bitfields which are set. May be 0. Field values must be appended to the end of the message.
<i>CancelOrderBitfield<sup>1</sup></i>	31	1	Binary	Bitfield identifying fields to follow. Only present if <i>NumberOfCancelOrderBitfields</i> is non-zero.
...				
<i>CancelOrderBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Cancel Order Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	2A 00	42 bytes
<i>MessageType</i>	39	Cancel Order
<i>MatchingUnit</i>	0	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence Number 100
<i>OrigClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>NumberOfCancelOrderBitfields</i>	02	Two bitfields to follow
<i>CancelOrderBitfield1</i>	01	<i>ClearingFirm</i>
<i>CancelOrderBitfield2</i>	08	<i>SendTime</i>
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>SendTime</i>	E0 7A B9 DA 13 3B 42 16	1,603,909,373,757,324,000 = Wed, Oct 28, 2020 at 14:22:53.757324 ET.

### Mass Cancel Order Message Example

Field Name	Hexadecimal	Notes
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<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	54 00	84 bytes
<i>MessageType</i>	39	Cancel Order
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence Number 100
<i>OrigClOrdID</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	(empty)
<i>NumberOfCancel</i>	02	Two bitfields to follow
<i>OrderBitfields</i>		
<i>CancelOrderBitfield1</i>	19	<i>ClearingFirm, RiskRoot, MassCancelId</i>
<i>CancelOrderBitfield2</i>	09	<i>MassCancelInst, SendTime</i>
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>RiskRoot</i>	4D 53 46 54 00 00	MSFT
<i>MassCancelId</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>MassCancelInst</i>	46 53 4C 42 00 00 00 00 00 00 00 00 00 00 00 00	F = Cancel orders matching clearing firm TEST S = Single ack L = Lockout symbol MSFT B = Cancel simple and complex
<i>SendTime</i>	E0 7A B9 DA 13 3B 42 16	1,603,909,373,757,324,000 = Wed, Oct 28, 2020 at 14:22:53.757324 ET.

#### 4.1.6 Modify Order Message Fields

Request to modify an order. The order attributes to be modified are selected using *NumberOfModifyBitfields* and some number of bitfields to follow. *Price*, *OrderQty*, *OrdType*, *MaxFloor* (BZX, C1, and C2 only), and *StopPx* may be adjusted. *OrdType* may be adjusted from Limit to Market (market and stop/stop limit orders are not supported during GTH or Curb sessions).

- Time priority will be maintained on an order modification in the following cases:
  - A decrease in *OrderQty* with no other changes
  - An update to *StopPx* on an unelected stop order with no other changes
  - An update to *MaxFloor* with no other changes
- An order modification combining two or more of the specific items above will not lose priority.
- An order modification involving one of the items above and changes to any other attribute will lose priority.
- An order modification with no change to any attribute will lose priority.

Changes in *OrderQty* result in an adjustment of the current order's *OrderQty*. The new *OrderQty* does not directly replace the current order's *LeavesQty*. Rather, a delta is computed from the current *OrderQty* and the replacement *OrderQty*. This delta is then applied to the current *LeavesQty*. If the resulting *LeavesQty* is less than or equal to zero, the order is cancelled. This results in safer behavior when the modification request overlaps partial fills for the current order, leaving the Member in total control of the share exposure of the order.

A Modify Order message should not be issued until the Order Acknowledgement message for the previous New Order or Order Modified message for the previous Modify Order message has been received. The BOE handler will reject a new Modify Order message if it has not been accepted or it has not seen the result of the prior modification from the Matching Engine. However, Modify Order requests that merely reduce *OrderQty* may be overlapped if the existing *ClOrdID* is reused, as long as the trading identifier has not been opted-in to daily limit trading risk controls. This is the only case where reuse of the *ClOrdID* is allowed.

**The OrderQty and Price fields in the optional field block must be present on all Modify Order message requests.**  
Messages sent without *OrderQty* or *Price* fields will be rejected. *Price* is optional for market orders.

A maximum of 1,295 Modify Order message requests may be made to a single order each trading day. Once the 1,295<sup>th</sup> modification is made, the next user-generated message on the order should be a Cancel Order message request.

Permitted input optional fields are described in Section 5.6 – Modify Order.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x3A
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>ClOrdID</i>	10	20	Text	New <i>ClOrdID</i> for this order.
<i>OrigClOrdID</i>	30	20	Text	Corresponds to <i>OrigClOrdID</i> (41) in Cboe FIX.  <i>ClOrdID</i> of the order to replace.  In the case of multiple changes to a single order, this will be the <i>ClOrdID</i> of the most recently accepted change.
<i>NumberOfModifyOrderBitfields</i>	50	1	Binary	Bitfield identifying bitfields which are set. May be 0. Field values must be appended to the end of the message.
<i>ModifyOrder Bitfield<sup>1</sup></i>	51	1	Binary	Bitfield identifying fields to follow.
...				
<i>ModifyOrder Bitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Modify Order Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	3E 00	82 bytes
<i>MessageType</i>	3A	Modify Order
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence Number 100
<i>ClOrdID</i>	41 42 43 31 32 34 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC124
<i>OrigClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>NumberOfModifyOrderBitfields</i>	01	One bitfield to follow
<i>ModifyOrderBitfield1</i>	0C	<i>OrderQty, Price</i>
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>Price</i>	08 E2 01 00 00 00 00 00	12.34

#### 4.1.7 Quote Update Message Fields

Request to enter or update one or more quotes. `Quote Update` message requests will be forwarded in their entirety to the matching engine instance as a single message and will be applied in a single transaction. Optional bitfields are not supported for any response messages for quotes. The system will only accept `Quote Update` message requests entered via a BOE Bulk Quoting port that are marked with the *Capacity* value = 'M' (Market Maker). A valid registered Market-Maker account value must be provided in the *ClearingAccount* field or the system will respond with the `QuoteUpdateRejected` message containing the *QuoteRejectReason* value of 'C' = InvalidClearing.

All options in a single `Quote Update` message must trade under a single risk root. Requests which include options trading under multiple risk roots will be rejected in their entirety.

A quote is unique per port, EFID, and side. You may quote multiple price levels of depth using either multiple EFIDs on a single port or with the same EFID on multiple ports.

Quote requests are one-sided. To delete a quote, send an update with a zero price and/or size.

Quotes may utilize simple options only; complex options quotes may not be submitted.

By default quotes are valid for a given trading date, which may span multiple calendar dates in the event of a holiday. Quotes may be cancelled at the end of a given trading segment rather than carried forward to the next segment by updating the Multi-Segment Holiday Day Order Handling Port attribute.

Quotes may be marked post only. Quotes that cross the NBBO or displayed Cboe book will be accepted if within a configurable buffer range through the NBBO or displayed Cboe book. The buffer is set to 5% with a minimum of \$0.05 and a maximum of \$1.00. If a quote would be displayed at a price that locks the NBBO, it will be accepted/slid or rejected based on the *PostingInstruction* on the quote. Quotes can be opted out of the price-sliding functionality by specifying Book Only, No Slide or Post Only, No Slide in the *PostingInstruction* field on the quote message.

On **BZX Options only**, quote prices at non-displayable increments are permitted. Prices will be adjusted to the most aggressive non-locking price. Quotes may work (but not display) to lock an away market. Once posted, quotes act as a Display Price Sliding order. C2 and EDGX quotes act as Price Adjust orders.

If a quote modification is rejected, the resting quote being modified is also cancelled.

Executions, unsolicited cancels, and unsolicited modification response messages from the exchange are different from those for orders. They are optimized for efficiency and contain some different data elements (e.g., *QuoteUpdateID*) than the respective messages for orders.

The *PreventMatch* field may not be specified on the `Quote Update` message and Match Trade Prevention is only available if defaulted at the port level. For Bulk Quoting ports, only Cancel Newest, Cancel Oldest, or Cancel Both are permitted. If a Bulk Quoting port is not configured with both a default MTP Modifier and Unique ID Level, Match Trade Prevention will be disabled.

*Capacity* may not be changed when modifying a quote. To change *Capacity* of a resting quote, you must first send a quote with zero price and size and then re-enter the quote with the desired *Capacity*.

The `Quote Execution` message will be the only `Quote` related message available over ODROP and FIXDROP.

`Quote Update` requests sent without any changes to the currently resting quote ("no change quotes") will result in a loss of priority and will be reported back with a *QuoteResult* value of 'L' (Modified; loss of priority) in the `Quote Update Acknowledgement` message.

- Time priority will be maintained on a quote modification if there is a decrease in *OrderQty* with no other changes.
- A quote modification decreasing size and changes to any other attribute will lose priority.
- A quote modification with no change to any attribute will lose priority.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.

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<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x55
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>QuoteUpdateID</i>	10	16	Text	<p>ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the ‘at’ symbol and double quotes.</p> <p>Responses, both to the Quote Update and any Quote Executions, Quote Cancellations, and Quote Modification messages will include this identifier.</p> <p>Note: Cboe strongly recommends that <i>QuoteUpdateID</i> be kept unique for a trading day, and CAT reporting requirements mandate that <i>QuoteUpdateID</i> is unique for each Quote Update message sent to the Exchange.</p>
<i>ClearingFirm</i>	26	4	Alpha	EFID that will clear the trade. If left blank, the port attribute value of ‘Default EFID’ is used.
<i>ClearingAccount</i>	30	4	Alpha	<p>Corresponds to <i>OnBehalfOfSubID</i> (116) and <i>ClearingAccount</i> (440) in Cboe FIX.</p> <p>See <b>List of Optional Fields</b> for additional information.</p>
<i>CMTANumber</i>	34	4	Binary	<p>Corresponds to <i>ClearingFirm</i> (439) in Cboe FIX.</p> <p>See <b>List of Optional Fields</b> for additional information.</p>
<i>Account</i>	38	16	Text	<p>Corresponds to <i>Account</i> (1) in Cboe FIX.</p> <p>See <b>List of Optional Fields</b> for additional information.</p>
<i>CustomGroupID</i>	54	2	Binary	Optional. Used to group orders for use in Purge Orders. Set to 0 if functionality not needed.
<i>Capacity</i>	56	1	Alpha	<p>Corresponds to <i>OrderCapacity</i> (47) in Cboe FIX.</p> <p>See <b>List of Optional Fields</b> for additional information.</p>
<i>Reserved</i>	57	15	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.
<i>SendTime</i>	72	8	DateTime	<p>All Market Maker (Capacity=M) quote updates must populate with a timestamp representing the GMT time when the quote was sent by the Market Maker to the exchange. This timestamp is required to be at least in millisecond granularity but the CAT NMS Plan requires that Industry Members report the <i>SendTime</i> with the finest increment that is supported by the Industry Member. The <i>SendTime</i> is required in order to report Market Maker quotes to the CAT in accordance with the CAT NMS Plan.</p> <p>Market Makers are required to provide a valid, non-zero value for this field for any Quote Update messages entered via a BOE Bulk Quoting port. A zero value for <i>SendTime</i> will result in a rejection of the entire Quote Update message.</p>
<i>PostingInstruction</i>	80	1	Text	P = Post Only (do not remove liquidity)

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				B = Book Only (allow removal of liquidity, available for Market Makers only) N = Book Only, No Slide R = Post Only, No Slide (do not remove liquidity) I = Book Only IOC
<i>SessionEligibility</i> <i>(C1 only)</i>	81	1	Text	R = Regular Trading Hours (RTH) only A = Participates in both Global and Regular Trading Hours. Also allows for participation in Curb Trading Session. B = Participates in both RTH and Curb Session. Note market and stop/stop limit orders are not supported during GTH and Curb sessions.
<i>QuoteCnt</i>	82	1	Binary	Number of repeating groups included in this quote update. Allowed values are 1-20.
<i>Repeating Groups of ...</i>				
<i>Symbol</i>		6	Alphanumeric	Cboe native identifier
<i>Side</i>		1	Text	1 = Buy 2 = Sell
<i>OpenClose</i>		1	Text	Corresponds to <i>OpenClose</i> (77) in Cboe FIX. See <b>List of Optional Fields</b> for additional information.
<i>Price</i>		8	Binary Price	Limit price. To cancel an existing quote, specify a size of 0.
<i>OrderQty</i>		4	Binary	Order quantity. System limit is 999,999 contracts. To cancel an existing quote, specify a size of 0.
<i>Reserved</i>		12	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.

#### Quote Update Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	91 00	145 bytes
<i>MessageType</i>	55	Quote Update
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ClearingFirm</i>	41 42 43 44	ABCD
<i>ClearingAccount</i>	57 58 59 5A	WXYZ
<i>CMTANumber</i>	31 32 33 34	1234
<i>Account</i>	44 45 46 47 41 42 43 44 00 00 00 00 00 00 00 00	DEFGABCD
<i>CustomGroupID</i>	C8 00	200
<i>Capacity</i>	4D	M = Market Maker
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved
<i>SendTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>PostingInstruction</i>	50	P (Post Only)
<i>SessionEligibility</i>	52	R (RTH Only)
<i>QuoteCnt</i>	02	Two Quotes
<i>Symbol</i>	30 30 36 69 70 41	006ipA
<i>Side</i>	31	1 = Buy

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<i>OpenClose</i>	4F	O = Open
<i>Price</i>	C8 32 00 00 00 00 00 00	1.30
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	Reserved
<i>Symbol</i>	30 30 34 63 53 73	004cSs
<i>Side</i>	32	2 = Sell
<i>OpenClose</i>	4F	O = Open
<i>Price</i>	AC 07 01 00 00 00 00 00	6.75
<i>OrderQty</i>	F4 01 00 00	500 contracts
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	Reserved

#### 4.1.8 Quote Update (Short) Message Fields

A shorter version of `Quote Update` messages which restricts the information which can be presented. Uses less bandwidth than the `Quote Update` message but messages presented to the Matching Engine are identical between both `Quote Update` and `Quote Update (Short)` messages. The system will only accept `Quote Update` requests entered via a BOE Bulk Quoting port that are marked with the *Capacity* value = 'M' (Market Maker).

`Quote Update (Short)` message does not allow sending `Account` but a default for this field may be set at the port level. `CMTANumber` may never be included on a `Quote Update (Short)` message.

This message uses a smaller format `Price` and `OrderQty` on each quote update.

All other comments concerning `Quote Update` messages in the previous section apply to `Quote Update (Short)` equally.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x59
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>QuoteUpdateID</i>	10	16	Text	ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the '@' symbol and double quotes.  Responses, both to the <code>Quote Update</code> and any <code>Quote Executions</code> , <code>Quote Cancellations</code> , and <code>Quote Modification</code> messages will include this identifier.  Note: Cboe strongly recommends that <code>QuoteUpdateID</code> be kept unique for a trading day, and CAT reporting requirements mandate that <code>QuoteUpdateID</code> is unique for each <code>Quote Update</code> message sent to the Exchange.
<i>ClearingFirm</i>	26	4	Alpha	EFID that will clear the trade. If left blank, the port attribute value of 'Default EFID' is used.
<i>ClearingAccount</i>	30	4	Alpha	Corresponds to <code>OnBehalfOfSubID</code> (116) and <code>ClearingAccount</code> (440) in Cboe FIX.  See <b>List of Optional Fields</b> for additional information.
<i>CustomGroupID</i>	34	2	Binary	Optional. Used to group orders for use in <code>Purge Orders</code> messages. Set to 0 if functionality not needed.

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<i>Capacity</i>	36	1	Alpha	Corresponds to <i>OrderCapacity</i> (47) in Cboe FIX. See <b>List of Optional Fields</b> for additional information.
<i>Reserved</i>	37	3	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.
<i>SendTime</i>	40	8	DateTime	All Market Maker (Capacity=M) quote updates must populate with a timestamp representing the GMT time when the quote was sent by the Market Maker to the exchange. This timestamp is required to be at least in millisecond granularity but the CAT NMS Plan requires that Industry Members report the <i>SendTime</i> with the finest increment that is supported by the Industry Member. The <i>SendTime</i> is required in order to report Market Maker quotes to the CAT in accordance with the CAT NMS Plan.  Market Makers are required to provide a valid, non-zero value for this field for any <i>Quote Update</i> messages entered via a BOE Bulk Quoting port. A zero value for <i>SendTime</i> will result in a rejection of the entire <i>Quote Update</i> message.
<i>PostingInstruction</i>	48	1	Text	P = Post Only (do not remove liquidity) B = Book Only (allow removal of liquidity, available for Market Makers only) N = Book Only, No Slide R = Post Only, No Slide (do not remove liquidity) I = Book Only IOC
<i>SessionEligibility (C1 only)</i>	49	1	Text	R = Regular Trading Hours (RTH) only A = Participates in both Global and Regular Trading Hours. Also allows for participation in Curb Trading Session. B = Participates in both RTH and Curb Session
<i>QuoteCnt</i>	50	1	Binary	Number of repeating groups included in this quote update. Allowed values are 1-20.
<i>Repeating Groups of ...</i>				
<i>Symbol</i>		6	Alphanumeric	Cboe native identifier
<i>Side</i>		1	Text	1 = Buy 2 = Sell
<i>OpenClose</i>		1	Text	Corresponds to <i>OpenClose</i> (77) in Cboe FIX. See <b>List of Optional Fields</b> for additional information.
<i>Price</i>		4	Short Binary Price	Limit price.  To cancel an existing quote, specify a size of 0.
<i>OrderQty</i>		2	Binary	Order quantity. System limit is 999,999 contracts.  To cancel an existing quote, specify a size of 0.
<i>Reserved</i>		2	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.

#### Quote Update Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	91 00	145 bytes
<i>MessageType</i>	59	Quote Update (Short)
<i>MatchingUnit</i>	00	Always 0 for inbound messages

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<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ClearingFirm</i>	41 42 43 44	ABCD
<i>ClearingAccount</i>	57 58 59 00	WXY
<i>CustomGroupID</i>	C8 00	200
<i>Capacity</i>	4D	M = Market Maker
<i>Reserved</i>	00 00 00	Reserved
<i>SendTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>PostingInstruction</i>	50	P (Post Only)
<i>SessionEligibility</i>	52	R (RTH Only)
<i>QuoteCnt</i>	02	Two Quotes
<i>Symbol</i>	30 30 36 69 70 41	006ipA
<i>Side</i>	31	1 = Buy
<i>OpenClose</i>	4F	O = Open
<i>Price</i>	C8 32 00 00	1.30
<i>OrderQty</i>	64 00	100 contracts
<i>Reserved</i>	00 00	Reserved
<i>Symbol</i>	30 30 34 63 53 73	004cSs
<i>Side</i>	32	2 = Sell
<i>OpenClose</i>	4F	O = Open
<i>Price</i>	AC 07 01 00	6.75
<i>OrderQty</i>	F4 01	500 contracts
<i>Reserved</i>	00 00	Reserved

#### 4.1.9 Purge Orders Message Fields

Request to cancel a group of orders across all the firm's sessions. This differs from a mass cancel request sent via a *Cancel Order* message as the purge is applied across all of the firm's sessions, not just the session on which the message was received.

A purge requires populating the *MassCancelInst* field. The *ClearingFirm (EFID)* is also required if a list of configured/allowed EFIDs has not been configured on the session. If a list of configured EFIDs is present, sending a blank (0x00) ClearingFirm value will result in the purge applying to all configured EFIDs. In addition, a firm may choose to further filter the purge to target specific orders using either the *CustomGroupID* or *RiskRoot* fields. If both *RiskRoot* and a list of *CustomGroupID* values are specified, the *Purge Orders* message request will be rejected. The items below should also be considered.

- Users must specify the *MassCancelId* if the Acknowledgement Style is set to 'S' or 'B'.
- Users may initiate a self-imposed, risk lockout using the *MassCancelInst* field.
- EFID values specified in the *ClearingFirm* field that are not allowed to clear for the firm will be rejected.
- *CustomGroupID* or EFID (*ClearingFirm*) purges with no *RiskRoot* may be directed to a specific matching unit using the *MatchingUnit* optional field. If *MatchingUnit* is zero or not specified, these purge types will be sent to all matching units starting with unit 1. **Note that this may result in self-imposed, risk lockouts occurring on select units while other units are still trading.**

When specifying the *RiskRoot* field, using the underlying symbol is strongly recommended. Mass cancellations are always performed at the risk root (underlying) level.

All Members that send purges **must** include the *SendTime* field. This is required to ensure that a valid cancellation send time is captured and reported to CAT.

The system limits the rate at which identical *Purge Orders* message requests can be submitted to the system. Requests are restricted to ten (10) messages per second per port.

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An identical purge message is defined as a message having all of the same *CustomGroupID*, *Symbol*, *Clearing Firm*, *MatchingUnit*, *Lockout Instruction*, *Instrument Type Filter* and *GTC Order Filter* field values, as a previously received message.

Permitted input optional fields are described in Section 5.7 – Purge Orders.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x47
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>Reserved</i>	10	1	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.
<i>NumberOfPurgeOrdersBitfields</i>	11	1	Binary	Bitfield identifying bitfields which are set. May be 0. Field values must be appended to the end of the message.
<i>PurgeOrderBitfield<sup>1</sup></i>	12	1	Binary	Bitfield identifying fields to follow. Only present if <i>NumberOfPurgeOrdersBitfields</i> is non-zero.
<i>CustomGroupIDCnt</i>	13	1	Binary	Number of repeating <i>CustomGroupID</i> included in this message.
<i>CustomGroupID<sup>1</sup></i>		2	Binary	First <i>CustomGroupID</i> . Only present if <i>CustomGroupIDCnt</i> is non-zero.
...				
<i>CustomGroupID<sup>n</sup></i>		2	Binary	Last <i>CustomGroupID</i> .
<i>Optional fields...</i>				

#### **Purge Orders Message with CustomGroupID and Lockout Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	41 00	65 bytes
<i>MessageType</i>	47	Purge Orders
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>Reserved</i>	00	Reserved
<i>NumberOfPurgeOrderBitfields</i>	02	Two bitfields to follow
<i>PurgeOrdersBitfield1</i>	15	<i>ClearingFirm</i> , <i>MassCancelInst</i> , <i>MassCancelID</i> , <i>SendTime</i>
<i>PurgeOrdersBitfield2</i>	40	
<i>CustomGroupIDCnt</i>	02	Two CustomGroupIDs to follow
<i>CustomGroupID1</i>	BF BE	First <i>CustomGroupID</i> of 48831
<i>CustomGroupID2</i>	CO BE	Second <i>CustomGroupID</i> of 48832
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>MassCancelInst</i>	46 53 4C 42 00 00 00 00 00 00 00 00 00 00	F = Cancel orders matching clearing firm TEST S = Single ack L = Lockout both <i>CustomGroupIDs</i> B = Cancel simple and complex

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<i>MassCancelID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>SendTime</i>	E0 7A B9 DA 13 3B 42 16	1,603,909,373,757,324,000 = Wed, Oct 28, 2020 at 14:22:53.757324 ET.

**Purge Orders Message with Product Level Filter and no Lockout Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	43 00	67 bytes
<i>MessageType</i>	47	Purge Orders
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>Reserved</i>	00	Reserved
<i>NumberOfPurge</i>	02	Two bitfields to follow
<i>OrderBitfields</i>		
<i>PurgeOrdersBitfield1</i>	1D	<i>ClearingFirm</i> , <i>MassCancelInst</i> , <i>RiskRoot</i> , <i>MassCancelID</i>
<i>PurgeOrdersBitfield2</i>	40	<i>SendTime</i>
<i>CustomGroupIDCnt</i>	00	No CustomGroupIDs to follow
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>MassCancelInst</i>	46 53 4E 42 00 00 00 00 00 00 00 00 00 00 00 00	F = Cancel orders matching clearing firm TEST
<i>RiskRoot</i>	41 42 43 00 00 00	S = Single ack
<i>MassCancelID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00	N = No lockout
<i>SendTime</i>	E0 7A B9 DA 13 3B 42 16	B = Cancel simple and complex ABC ABC123
		1,603,909,373,757,324,000 = Wed, Oct 28, 2020 at 14:22:53.757324 ET.

#### 4.1.10 Reset Risk Message Fields

Reset or release Firm, Risk Root, or Custom Group ID level lockout conditions resulting from risk profile trips or self-imposed lockouts issued via *Cancel Order* or *Purge Orders* messages. Risk resets can be performed using this message or by using the *RiskReset* field on a *New Order* message.

When specifying the *RiskRoot* field, using the underlying symbol is strongly recommended. Risk Resets are always performed at the risk root (underlying) level.

Only one unique risk reset of a given type (EFID Group, EFID, Risk Root, CustomGroupID) is allowed per 100 milliseconds per port. Additional resets will be ignored (*RiskResetResult* = <space>). For example, a customer may reset risk for *CustomGroupID* = 1 and may not reset risk again for *CustomGroupID* = 1 until 100 milliseconds has elapsed. This restriction is designed to safeguard the trading platform from excessive risk messaging. On C1 only, If a risk limit is tripped or manually locked out at the end of the RTH session, the trip/lockout will persist into the Curb session.

*CustomGroupID* or *EFID* (*ClearingFirm*) risk resets may be directed to a specific matching unit using the *TargetMatchingUnit* optional field. If *TargetMatchingUnit* is zero, the risk reset will be sent to all matching units starting with unit 1.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.

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<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x56
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>RiskStatusID</i>	10	16	Text	Unique identifier for this Reset Risk request. Response message will have this corresponding identifier.  <b>Note: Cboe only enforces uniqueness of <i>RiskStatusID</i> values among currently unacknowledged requests. However, we strongly recommend that you keep your <i>RiskStatusID</i> values day-unique.</b>
<i>RiskReset</i>	26	8	Text	Corresponds to <i>RiskReset</i> (7692) in Cboe FIX. Indicates Risk Root, Firm, or CustomGroupID lockout reset.  See <b>List of Optional Fields</b> for allowed values.
<i>TargetMatchingUnit</i>	34	1	Binary	Direct the reset risk to a specific matching unit. A zero value will cause the reset risk to be sent to all matching units. Ignored for risk root level resets.
<i>Reserved</i>	35	3	Binary	Reserved for future expansion. To maintain forward compatibility, fill with 0.
<i>ClearingFirm</i>	38	4	Alpha	Risk will be reset for this EFID.
<i>RiskRoot</i>	42	6	Alphanumeric	Populate with Risk Root for resets at the Risk Root level.  Leave empty for resets at the EFID level.
<i>CustomGroupID</i>	48	2	Binary	Populate with an identifier for resets including a CustomGroupID.  Set to 0 to ignore.

#### Reset Risk Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	30 00	48 bytes
<i>MessageType</i>	56	Reset Risk
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>RiskStatusID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>RiskReset</i>	53 46 00 00 00 00 00 00 00	SF = Symbol and EFID level reset
<i>TargetMatchingUnit</i>	00	0 = target all matching units
<i>Reserved</i>	00 00 00	
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>RiskRoot</i>	41 42 43 00 00 00	ABC
<i>CustomGroupID</i>	00 00	No <i>CustomGroupID</i>

#### Reset Risk Message Targeting a Matching Unit Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	30 00	48 bytes

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<i>MessageType</i>	56	Reset Risk
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>RiskStatusID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>RiskReset</i>	53 46 00 00 00 00 00 00 00	SF = Symbol and EFID level reset
<i>TargetMatchingUnit</i>	1A	26 = target matching unit 26
<i>Reserved</i>	00 00 00	
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>RiskRoot</i>	00 00 00 00 00 00	No <i>RiskRoot</i>
<i>CustomGroupID</i>	00 00	No <i>CustomGroupID</i>

#### 4.1.11 New Complex Instrument Message Fields (C1, C2, and EDGX Only)

A New Complex Instrument message is used to request that the system create a complex strategy. The resulting symbol (if accepted by the system) will be returned in a Complex Instrument Accepted message; a Complex Instrument Rejected message will be sent if it is not accepted. All legs must have the same underlying product which can be different OSI Roots (i.e. XYZ and XYZ1).

A *ClearingFirm* must be sent on each New Complex Instrument message unless a Default Executing Firm ID is set at the port-level.

Permitted input optional fields are described in Section 5.8 – New Complex Instrument.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x4C
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>CIOrdID</i>	10	20	Text	Corresponds to <i>CIOrdID</i> (11) in Cboe FIX.  Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes.  If the <i>CIOrdID</i> matches a live order, the order will be rejected as duplicate.  <b>Note: Cboe only enforces uniqueness of <i>CIOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>CIOrdID</i> values day-unique.</b>
<i>NumberOfNewComplexInstrumentBitfields</i>	30	1	Binary	Bitfield identifying which bitfields are set. Field values must be appended to the end of the message.
<i>NewComplexInstrumentBitfield<sup>1</sup></i>	31	1	Binary	Bitfield identifying fields to follow.
....				
<i>NewComplexInstrumentBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>NoLegs</i>		1	Binary	Corresponds to <i>NoLegs</i> (555) in Cboe FIX.  Indicates the number of repeating groups to fol-

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				low. Must be a minimum of 2 and a maximum of 16.
Repeating Group <i>ComplexLeg</i> must occur the number of times specified in <i>NoLegs</i> . Each field occurs in each group, in order as shown below. Optional fields occur only if corresponding bits in bitfields are set.				
<i>LegSymbol</i>	8	Alphanumeric	Corresponds to <i>LegSymbol</i> (600) in Cboe FIX.  Entire Cboe format symbol or OSI Root.  <b>Must send LegCFICode, LegMaturityDate, and LegStrikePrice if using OSI format.</b>	
<i>LegCFICode (Optional)</i>	6	Alphanumeric	Corresponds to <i>LegCFICode</i> (608) in Cboe FIX.  CFI Code for leg. Required if <i>LegSymbol</i> is in OSI format.  OP = Options Put OC = Options Call E = Equity	
<i>LegMaturityDate (Optional)</i>	4	Date	Corresponds to <i>LegMaturityDate</i> (611) in Cboe FIX.  Required if <i>LegSymbol</i> is in OSI format.	
<i>LegStrikePrice (Optional)</i>	8	Binary Price	Corresponds to <i>LegStrikePrice</i> (612) in Cboe FIX.  Option strike price. System maximum is 99,999,999. Must be non-negative.  Required if <i>LegSymbol</i> is in OSI format.	
<i>LegRatioQty</i>	4	Binary	Corresponds to <i>LegRatioQty</i> (623) in Cboe FIX.  Ratio of number of contracts in this leg per order quantity.  Accepted values are 1-999,999.	
<i>LegSide</i>	1	Alphanumeric	Corresponds to <i>LegSide</i> (624) in Cboe FIX.  1 = Buy 2 = Sell	
<i>Optional fields...</i>				Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

#### New Complex Instrument Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	61 00	97 bytes
<i>MessageType</i>	4C	New Complex Instrument
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>NumberOfNewComplex</i>	01	One bitfield to follow
<i>InstrumentBitfields</i>	0F	
<i>NewComplex</i>		<i>LegCFICode, LegMaturityDate, LegStrikePrice, ClearingFirm</i>
<i>InstrumentBitfield1</i>		
<i>NoLegs</i>	02	Two legs
<i>LegSymbol</i>	4D 53 46 54 00 00 00 00	MSFT
<i>LegCFICode</i>	4F 43 00 00 00 00	OC = Option Call
<i>LegMaturityDate</i>	EF DB 32 01	2011-03-19
<i>LegStrikePrice</i>	98 AB 02 00 00 00 00 00	17.50

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<i>LegRatioQty</i>	02 00 00 00	Ratio of 2
<i>LegSide</i>	31	Buy
<i>LegSymbol</i>	4D 53 46 54 00 00 00 00	MSFT
<i>LegCFICode</i>	4F 50 00 00 00 00	OP = Option Put
<i>LegMaturityDate</i>	F6 DB 32 01	2011-03-26
<i>LegStrikePrice</i>	30 E6 02 00 00 00 00 00	19.00
<i>LegRatioQty</i>	01 00 00 00	Ratio of 1
<i>LegSide</i>	32	Sell
<i>ClearingFirm</i>	54 45 53 54	TEST

#### 4.1.12 Add Floor Trade Message Fields (C1 Only)

TPHs having in-person Market Makers on the Cboe trading floor can enter their version of a floor trade via the Add Floor Trade message type.

This message may be used to report any floor trades, but is primarily meant to be used to report floor trades between Market Makers. TPHs are encouraged to use Floor Trade Confirmation messages to respond to floor broker allocations (Floor Trade Notification messages) if they agree with the terms of the trade.

The Exchange will respond to an Add Floor Trade message with an Add Floor Trade Rejected message or an Order Acknowledgement message followed by one or more Order Executed messages.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x5C
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>CIOrdID</i>	10	20	Text	<p>Corresponds to <i>CIOrdID</i> (11) in Cboe FIX.</p> <p>Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes.</p> <p>If the <i>CIOrdID</i> matches a live order, the order will be rejected as duplicate.</p> <p><b>Note: Cboe only enforces uniqueness of <i>CIOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>CIOrdID</i> values day-unique.</b></p>
<i>Symbol</i>	30	8	Alphanumeric	<p>Corresponds to <i>Symbol</i> (55) in Cboe FIX.</p> <p>Entire Cboe format symbol or OSI symbol if using long format.</p>
<i>PutOrCall</i>	38	1	Alphanumeric	<p>Corresponds to <i>PutOrCall</i> (201) in Cboe FIX.</p> <p>0 = Put 1 = Call</p> <p>NULL (0x00) filled if using Cboe format symbol.</p>
<i>StrikePrice</i>	39	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX.

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				Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.
<i>MaturityDate</i>	47	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX. NULL (0x00) filled if using Cboe format symbol.
<i>MultilegReportingType</i>	51	1	Alphanumeric	Corresponds to <i>MultilegReportingType</i> (442) in Cboe FIX. Indicates the type of Order Execution message. 1 = Single-leg instrument 2 = Individual leg of multi-leg instrument
<i>ComboOrder</i>	52	1	Alpha	Corresponds to <i>ComboOrder</i> (22005) in Cboe FIX. Declare the order as a Combo (for regulatory relief if trading SPX on the floor). N = (Default) No Y = Yes
<i>Account</i>	53	16	Text	Corresponds to <i>Account</i> (1) in Cboe FIX. Reflected back on execution reports associated with this order and also passed through to the OCC in the Optional Data field (16 characters) and Customer ID field (max 10 characters). May be made available in the Member's clearing file. A maximum of 10 characters will be passed through to the OCC Customer ID Field but up to 16 characters will be maintained internally. Characters in ASCII range 33-126 are allowed. <i>Account</i> (1) will only be mapped to the OCC via the Customer ID field (max 10 characters) and the new <i>ClearingOptionalData</i> (9324) field will be mapped to the OCC via the Optional Data field (16 characters).
<i>ClearingOptionalData</i>	69	16	Text	Corresponds to <i>ClearingOptionalData</i> (9324) in Cboe FIX. This field will be reflected back on execution reports, FIX DROP ports and it will be passed through to the OCC in the Optional Data field.
<i>ClearingAccount</i>	85	4	Text	Corresponds to <i>ClearingAccount</i> (440) in Cboe FIX. When <i>Capacity</i> is set to a value of M or N for Market Maker, this field should be filled with the desired market maker ID. When using CMTA, this value is the Market Maker ID for the CMTA member instead of the Cboe member executing the trade. This field will be sent to the OCC. If <i>OrderCapacity</i> (47) is not set to 'M' or 'N' and <i>ClearingAccount</i> is populated, the order will be rejected by default on C1 and C2 and will be accepted by default for BZX and EDGX Only. This field is recorded and returned in execution reports. Available via FIX Drop.
<i>CMTANumber</i>	89	4	Binary	Corresponds to <i>CMTANumber</i> (439) in Cboe FIX.

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				CMTA Number of the firm that will clear the trade. Must be specified for CMTA orders and left unspecified for non-CMTA orders.
<i>FloorTraderAcronym</i>	93	3	Alpha	Floor acronym of participant submitting trade.
<i>Side</i>	96	1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX. 1 = Buy 2 = Sell
<i>OrderQty</i>	97	4	Binary	Corresponds to <i>OrderQty</i> (38) in Cboe FIX. Order quantity. System limit is 999,999 contracts.
<i>Price</i>	101	8	Binary Price	Corresponds to <i>Price</i> (44) in Cboe FIX. Limit price. Order rejected if priced finer than the minimum trading increment for the option.
<i>TransactionTime</i>	109	8	DateTime	Report send time (for audit).
<i>OpenClose</i>	117	1	Alphanumeric	Corresponds to <i>OpenClose</i> (77) in Cboe FIX. Indicates status of client position in the option. O = Open C = Close N = None*  *Orders with <i>Capacity</i> = 'M' or 'N' will not be required to specify <i>OpenClose</i> on their orders or may optionally specify a value of 'N', unless the series is limited to closing only.  If the series is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B', or the order has a <i>RoutingInst</i> = 'P'.  An Open position cannot trade with an Open position for series limited to Closing Only transactions, even if the inbound IOC from the aggressing market maker is sent with that combination of tags.
<i>FloorTradeTime</i>	118	8	Date Time	Trade time
<i>ContraTrader</i>	126	4	Alphanumeric	Displays the EFID ( <i>ClearingFirm</i> ) of the contra side firm on all internally matched executions.
<i>Reserved</i>	130	16	Reserved	Reserved

#### Add Floor Trade Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	90 00	144 bytes
<i>MessageType</i>	5C	Add Floor Trade
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	

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<i>MultilegReportingType</i>	31	1 = Single leg instrument
<i>ComboOrder</i>	4E	N = No
<i>Account</i>	00 00 00 00 00 00 00 00 00 00 00 00	
	00 00 00 00 00 00	
<i>ClearingOptionalData</i>	00 00 00 00 00 00 00 00 00 00 00 00	
	00 00 00 00 00 00	
<i>ClearingAccount</i>	41 42 43 00	ABC
<i>CMTANumber</i>	00 00 00 00	
<i>FloorTraderAcronym</i>	44 45 46	DEF
<i>Side</i>	31	1 = Buy
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>Price</i>	C8 32 00 00 00 00 00 00	1.30
<i>TransactionTime</i>	00 5C DB E2 27 12 B4 15	1,563,894,933,123,456,000
<i>OpenClose</i>	4F	O = Open
<i>FloorTradeTime</i>	68 23 4A 8B 27 12 B4 15	1,563,894,931,654,321,000
<i>ContraTrader</i>	57 58 59	WXY
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	Reserved
	00 00 00 00 00 00	

#### 4.1.13 Floor Trade Confirmation Message Fields (C1 Only)

TPHs are encouraged to use Floor Trade Confirmation messages to respond to Floor Trade Notification messages if they agree with the terms of the trade. Alternatively, an Add Floor Trade message may be used to enter their version of the floor trade. If the floor trade notification is not known to the user (for example, if the TPH is misidentified as a contra party to a floor trade), the message can be disregarded; a response is not required.

The exchange will respond to a Floor Trade Confirmation message with an Order Executed message or Floor Trade Confirmation Rejected message.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x5B
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.
<i>ClOrdID</i>	10	20	Text	<p>Corresponds to <i>ClOrdID</i> (11) in Cboe FIX.</p> <p>Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes.</p> <p>If the <i>ClOrdID</i> matches a live order, the order will be rejected as duplicate.</p> <p><b>Note:</b> Cboe only enforces uniqueness of <i>ClOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>ClOrdID</i> values day-unique.</p>

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<i>ExecID</i>	30	8	Binary	<p>Corresponds to <i>ExecID</i> (17) in Cboe FIX.</p> <p>Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on ODRSP and FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.</p> <p>Example conversion:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><b>Decimal</b></th><th style="text-align: center;"><b>Base 36</b></th></tr> </thead> <tbody> <tr> <td style="text-align: center;">28294005440239</td><td style="text-align: center;">A1234B567</td></tr> <tr> <td style="text-align: center;">76335905726621</td><td style="text-align: center;">R248BC23H</td></tr> <tr> <td style="text-align: center;">728557228187</td><td style="text-align: center;">09AP05V2Z</td></tr> </tbody> </table>	<b>Decimal</b>	<b>Base 36</b>	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
<b>Decimal</b>	<b>Base 36</b>											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>Symbol</i>	38	8	Alphanumeric	<p>Corresponds to <i>Symbol</i> (55) in Cboe FIX.</p> <p>Entire Cboe format symbol or OSI symbol if using long format.</p>								
<i>PutOrCall</i>	46	1	Alphanumeric	<p>Corresponds to <i>PutOrCall</i> (201) in Cboe FIX.</p> <p>0 = Put 1 = Call NULL (0x00) filled if using Cboe format symbol.</p>								
<i>StrikePrice</i>	47	8	Binary Price	<p>Corresponds to <i>StrikePrice</i> (202) in Cboe FIX.</p> <p>Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.</p>								
<i>MaturityDate</i>	55	4	Date	<p>Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX.</p> <p>NULL (0x00) filled if using Cboe format symbol.</p>								
<i>TransactionTime</i>	59	8	DateTime	Report send time (for audit).								
<i>PriceType</i>	67	1	Alphanumeric	<p>Corresponds to <i>PriceType</i> (423) in Cboe FIX.</p> <p>2 = (Default) Price per unit (contract)</p>								
<i>Reserved</i>	68	15	Reserved	Reserved								

### Floor Trade Confirmation Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	51 00	81 bytes
<i>MessageType</i>	5B	Floor Trade Confirmation
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	
<i>TransctionTime</i>	00 5C DB E2 27 12 B4 15	1,563,894,933,123,456,000
<i>PriceType</i>	32	2 = Price per unit

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<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	<i>Reserved</i>
	00 00 00 00 00	

#### 4.1.14 Delete Floor Trade (C1 Only)

TPHs having in-person Market Makers on the Cboe trading floor can request the deletion of their version of a floor trade via the Delete Floor Trade message type. The trade report to delete will be identified by the *ExecID*. The TPH entering the floor trade deletion message must be on the specified side of the identified trade. The Exchange will respond to a Delete Floor Trade message with a Delete Floor Trade Reject message or with a Delete Floor Trade Acknowledgement message if the floor trade report is successfully deleted.

Field	Offset	Length	Data Type	Description								
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.								
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.								
<i>MessageType</i>	4	1	Binary	0x5D								
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.								
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.								
<i>ClOrdID</i>	10	20	Text	<p>Corresponds to <i>ClOrdID</i> (11) in Cboe FIX.</p> <p>Day-unique ID chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes</p> <p>If the <i>ClOrdID</i> matches a live order, the order will be rejected as duplicate.</p> <p><b>Note: Cboe only enforces uniqueness of <i>ClOrdID</i> values among currently live orders. However, we strongly recommend that you keep your <i>ClOrdID</i> values day-unique.</b></p>								
<i>ExecID</i>	30	8	Binary	<p>Corresponds to <i>ExecID</i> (17) in Cboe FIX.</p> <p>Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on ODROP and FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.</p> <p>Example conversion:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Decimal</th> <th>Base 36</th> </tr> </thead> <tbody> <tr> <td>28294005440239</td> <td>A1234B567</td> </tr> <tr> <td>76335905726621</td> <td>R248BC23H</td> </tr> <tr> <td>728557228187</td> <td>09AP05V2Z</td> </tr> </tbody> </table>	Decimal	Base 36	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
Decimal	Base 36											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>Symbol</i>	38	8	Alphanumeric	<p>Corresponds to <i>Symbol</i> (55) in Cboe FIX.</p> <p>Entire Cboe format symbol or OSI symbol if using long format.</p>								

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<i>PutOrCall</i>	46	1	Alphanumeric	Corresponds to <i>PutOrCall</i> (201) in Cboe FIX. 0 = Put 1 = Call NULL (0x00) filled if using Cboe format symbol.
<i>StrikePrice</i>	47	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX. Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.
<i>MaturityDate</i>	55	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX. NULL (0x00) filled if using Cboe format symbol.
<i>Side</i>	59	1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX. 1 = Buy 2 = Sell
<i>Reserved</i>	60	16	Reserved	Reserved

**Delete Floor Trade Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	4A 00	74 bytes
<i>MessageType</i>	5D	Delete Floor Trade
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	
<i>Side</i>	31	Buy
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved

## 4.2 Cboe to Member

### 4.2.1 Order Acknowledgment Message Fields

Order Acknowledgment messages are sent in response to New Order and New Complex Order messages. The message corresponds to a FIX Execution Report with *ExecType* (150) = 0 (New).

Per the instructions given in a Return Bitfields Parameter Group on the Login Request (Section 3.1.1 – Login Request), optional fields may be appended to echo back information provided in the original New Order message. Fields which have been requested to be echoed back but which were not filled in will still be sent, but filled with binary zero (0x00).

Permitted return optional fields are described in Section 6.1 – Order Acknowledgement.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x25
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	Echoed back from the original order.
<i>OrderID</i>	38	8	Binary	Corresponds to <i>OrderID</i> (37) in Cboe FIX.  Order identifier supplied by Cboe. This identifier corresponds to the identifiers used in Cboe market data products.
<i>ReservedInternal</i>	46	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	47	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	48	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### Order Acknowledgment Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	4E 00	78 bytes
<i>MessageType</i>	25	Order Acknowledgment
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)

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<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	03	Three bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield1</i>	00	No bitfields from byte 1
<i>ReturnBitfield2</i>	41	<i>Symbol, Capacity</i>
<i>ReturnBitfield3</i>	05	<i>Account, ClearingAccount</i>
<i>Symbol</i>	31 32 33 61 42 63 00 00	123aBc
<i>Capacity</i>	50	P = Principal
<i>Account</i>	41 42 43 00 00 00 00 00 00 00 00	ABC
	00 00 00 00 00 00	
<i>ClearingAccount</i>	00 00 00 00	

#### **Minimal Order Acknowledgment Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	2E 00	46 bytes
<i>MessageType</i>	25	Order Acknowledgment
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn Bitfields</i>	00	No bitfields to follow

#### **4.2.2 Cross Order Acknowledgment Message Fields (C1 and EDGX Only)**

Cross Order Acknowledgment messages are sent in response to New Order Cross and New Order Cross Multileg messages. The message corresponds to a FIX Execution Report with *ExecType* (150) = 0 (New). In FIX, multiple execution reports could be generated from one new cross order message.

Per the instructions given in a Return Bitfields Parameter Group on the Login Request message (Section 3.1.1 – Login Request), optional fields may be appended to echo back information provided in the original New Order Cross message. Fields which have been requested to be echoed back but which were not filled in will still be sent, but filled with binary zero (0x00).

In each repeating group, the *ClOrdID* and *OrderId* are always returned. Beyond that, the bits specified in the optional return bitfields parameter group control which fields are returned. Any fields that appear in the repeating groups will not appear in the optional fields that come after the repeating groups.

Permitted return optional fields are described in Section 6.2 – Cross Order Acknowledgement.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x43
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.

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<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CrossID</i>	18	20	Text	Corresponds to <i>CrossID</i> (548) in Cboe FIX.  Echoed back from the original order.
<i>AuctionId</i>	38	8	Binary	Corresponds to <i>AuctionId</i> (9370) in Cboe FIX.  Auction order identifier supplied by Cboe. This identifier corresponds to the identifiers used in Cboe market data products.
<i>ReservedInternal</i>	46	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	47	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	48	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>GroupCnt</i>		2	Binary	Number of order allocations represented by repeating groups included in this message.
<i>Repeating Groups of...</i>				
<i>ClOrdId</i>		20	Text	Echoed back from the original order.
<i>OrderId</i>		8	Binary	OrderId assigned by the matching engine.
<i>Side (Optional)</i>		1	Alphanumeric	See <b>List of Optional Fields</b> .
<i>AllocQty (Optional)</i>		4	Binary	See <b>List of Optional Fields</b> .
<i>Capacity (Optional)</i>		1	Alpha	See <b>List of Optional Fields</b> .
<i>OpenClose (Optional)</i>		1	Alphanumeric	See <b>List of Optional Fields</b> .
<i>GiveUpFirmID (Optional)</i>		4	Alpha	See <b>List of Optional Fields</b> .
<i>Account (Optional)</i>		16	Text	See <b>List of Optional Fields</b> .
<i>CMTANumber (Optional)</i>		4	Binary	See <b>List of Optional Fields</b> .
<i>ClearingAccount (Optional)</i>		4	Text	See <b>List of Optional Fields</b> .
<i>Optional fields...</i>				Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

### Cross Order Acknowledgment Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	91 00	145 bytes
<i>MessageType</i>	43	Cross Order Acknowledgment
<i>MatchingUnit</i>	02	Matching Unit 2
<i>SequenceNumber</i>	01 00 00 00	Sequence number 1
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000

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<i>CrossID</i>	4E 5A 31 56 37 42 4A 5F 41 63 63 65 70 74 42 75 79 00 00 00	NZ1V7BJ_AcceptBuy
<i>AuctionId</i>	01 C0 91 A2 94 AB 78 04	2G4GYK000001 (base 36)
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	02	Two bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield1</i>	00	No bitfields from byte 1
<i>ReturnBitfield2</i>	41	<i>Symbol, Capacity</i>
<i>GroupCnt</i>	03 00	Three repeating groups to follow
<i>ClOrdID</i>	4E 5A 31 56 37 47 4E 5F 61 67 65 6E 63 79 00 00 00 00 00 00	NZ1V7GN_agency
<i>OrderID</i>	02 C0 91 A2 94 AB 78 04	2G4GYK000002 (base 36)
<i>Capacity</i>	43	C = Customer
<i>ClOrdID</i>	4E 5A 31 56 37 4B 46 5F 63 6F 6E 74 72 61 31 00 00 00 00 00	NZ1V7KF_contra1
<i>OrderID</i>	03 C0 91 A2 94 AB 78 04	2G4GYK000003 (base 36)
<i>Capacity</i>	46	F = Firm
<i>ClOrdID</i>	4E 5A 31 56 37 4E 48 5F 63 6F 6E 74 72 61 32 00 00 00 00 00	NZ1V7NH_contra2
<i>OrderID</i>	04 C0 91 A2 94 AB 78 04	2G4GYK000004 (base 36)
<i>Capacity</i>	46	F = Firm
<i>Symbol</i>	30 30 51 30 6B 41 00 00	00Q0KA

#### 4.2.3 Quote Update Acknowledgment Message Fields

Quote Update Acknowledgment messages are sent in response to a *Quote Update* message. The effect of each requested update will be found in this response. The ordering between request and response is preserved.

For quotes not marked post only which are priced at an executable price and which may remove liquidity against non-Market Maker liquidity, *QuoteResult* reason of ‘D’ or ‘d’ will be provided. In these cases, executions or cancellations (as needed) will immediately follow as additional messages. In some cases, an execution may not be permitted (e.g., risk management causes cancellation of the targeted order before execution), no additional messages will follow and the quote will post.

In some cases, a new *OrderID* will be assigned for an existing quote. There are currently two situations where this occurs, but others may be added in the future:

1. An order which has received a large number of quote updates over its life will be assigned a new *OrderID* if receiving an update which would cause a loss in priority.
2. A quote update sent to modify the *PostingInstruction* will be assigned a new *OrderID* if there is an existing quote in that symbol on that port and for that EFID.

If using the *OrderID* in your system or to correlate with an *OrderID* on PITCH, always be prepared to receive an update on an *Quote Update Acknowledgment* message.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x51
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. <i>MatchingUnit</i> will be set to 0. Unsequenced application message. <i>MatchingUnit</i> will be set to 0.

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<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. <i>SequenceNumber</i> will be set to 0. This will be an unsequenced application message. The sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>QuoteUpdateID</i>	18	16	Text	Echoed back from the Quote Update request.
<i>QuoteRejectReason</i>	34	1	Text	Reason for rejection of an entire Quote Update message by the matching engine. If an error is indicated, then no quotes were entered or updated. <i>QuoteCnt</i> will be 0.  <space> = Success  See <b>Quote Reason Codes</b> for a list of possible quote reject codes.  Additional reasons may be added in the future without warning.
<i>Reserved</i>	35	17	Binary	Reserved for future expansion. Filled with 0.
<i>QuoteCnt</i>	52	1	Binary	Number of repeating groups included in this acknowledgment. Allowed values are 1-20.
<i>Repeating Groups of ...</i>				
<i>OrderID</i>		8	Binary	Order ID assigned by the matching engine. Corresponds to order ID on PITCH.
<i>QuoteResult</i>		1	Text	<p>Result of the quote request.</p> <p><i>Acceptance:</i></p> <p>A = New Quote  I = IOC Quote Accepted  L = Modified; loss of priority  R = Modified; retains priority (size reduction)  N = No change, matches existing quote  D = New Quote, but may remove liquidity  d = Modified, but may remove liquidity  V = No change, existing constituent series quote modify attempt after cutoff time <b>(C1 only)</b></p> <p><i>Cancellation:</i></p> <p>U = User cancelled (zero size/price requested)</p> <p><i>Rejection:</i></p> <p>a = Admin  O = Rejected, doesn't match a known quote  P = Rejected, can't post  f = Risk management firm or Custom Group ID level  S = Rejected, symbol not found  p = Rejected, invalid price  r = Invalid Remove  s = Risk management risk root level  u = Rejected, other reason  + = Risk management EFID Group level  c = Rejected, closing only series</p>

				v = Rejected, attempt to add constituent series quote after cutoff time (C1 only)  Additional reasons indicating a reject may be added in the future with no notice.
<i>SubLiquidity Indicator</i>	1	Text	N = Normal S = NBBO Setter J = NBBO Joiner U = Market Turner (C1 only) <space> = No quote on book  New values may be added in the future without warning.	
<i>Subreason</i>	1	Text	Additional detail for a quote rejection.  See <b>Order and Quote Subreason Codes</b> for a list of possible subreasons.	
<i>Reserved</i>	5	Binary	Reserved for future expansion. Filled with 0.	

#### Quote Update Acknowledgment Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	53 00	83 bytes
<i>MessageType</i>	51	Quote Update Acknowledgment
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>QuoteRejectReason</i>	20	<space> = Success
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
<i>QuoteCnt</i>	02	Two Quotes
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>QuoteResult</i>	64	d = Modified, but may remove liquidity
<i>SubLiquidityIndicator</i>	4E	N = Normal
<i>Subreason</i>	20	<space> = None
<i>Reserved</i>	00 00 00 00 00	
<i>OrderID</i>	06 10 1E B7 5E 39 2F 02	171WC1000006 (base 36)
<i>QuoteResult</i>	4C	L = Modified, loss of priority
<i>SubLiquidityIndicator</i>	53	S = NBBO Setter
<i>Subreason</i>	20	<space> = None
<i>Reserved</i>	00 00 00 00 00	

#### 4.2.4 Order Rejected Message Fields

Order Rejected messages are sent in response to a New Order message which must be rejected. This message corresponds to a FIX Execution Report with *ExecType* (150) = 8 (Rejected). Order Rejected messages are unsequenced.

Permitted return optional fields are described in Section 6.3 – Order Rejected.

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<b>Field</b>	<b>Offset</b>	<b>Length</b>	<b>Data Type</b>	<b>Description</b>
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x26
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CIOrdnID</i>	18	20	Text	Echoed back from the original order.
<i>OrderRejectReason</i>	38	1	Text	Reason for an order rejection. See <b>Order Reason Codes</b> for a list of possible reasons.
<i>Text</i>	39	60	Text	Human readable text with more information about the reject reason.
<i>ReservedInternal</i>	99	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	100	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	101	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Order Rejected Message Example

<b>Field Name</b>	<b>Hexadecimal</b>	<b>Notes</b>
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	85 00	133 bytes
<i>MessageType</i>	26	Order Rejected
<i>MatchingUnit</i>	0	Unsequenced message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrdnID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderRejectReason</i>	44	D
<i>Text</i>	44 75 70 6C 69 63 61 74 65 20 43 6C 4F 72 64 49 44 00	Duplicate CIOrdnID
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn Bitfields</i>	04	Four bitfields to follow

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<i>ReturnBitfield1</i>	00	No bitfields from byte 1
<i>ReturnBitfield2</i>	01	<i>Symbol</i>
<i>ReturnBitfield3</i>	06	<i>ClearingFirm, ClearingAccount</i>
<i>ReturnBitfield4</i>	0F	<i>MaturityDate, StrikePrice, PutOrCall, OpenClose</i>
<i>Symbol</i>	54 4E 44 4D 00 00 00 00	TNDM
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>ClearingAccount</i>	00 00 00 00	(empty)
<i>MaturityDate</i>	EF DB 32 01	2011-03-19
<i>StrikePrice</i>	98 AB 02 00 00 00 00 00	17.50
<i>PutOrCall</i>	31	1 = Call
<i>OpenClose</i>	4F	O = Open

#### 4.2.5 Cross Order Rejected Message Fields (C1 and EDGX Only)

Cross Order Rejected messages are sent in response to a New Order Cross and New Order Cross Multileg messages which must be rejected. This message corresponds to a FIX Execution Report with *ExecType* (150) = 8 (Rejected). Order Rejected messages are unsequenced.

Permitted return optional fields are described in Section 6.4 – Cross Order Rejected.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x44
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CrossID</i>	18	20	Text	Echoed back from the original order.
<i>OrderRejectReason</i>	38	1	Text	Reason for an order rejection.  See <b>Order Reason Codes</b> for a list of possible reasons.
<i>Text</i>	39	60	Text	Human readable text with more information about the reject reason.
<i>ReservedInternal</i>	99	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	100	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	101	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Cross Order Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	59 00	89 bytes
<i>MessageType</i>	44	Cross Order Rejected
<i>MatchingUnit</i>	0	Unsequenced message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderRejectReason</i>	41	A
<i>Text</i>	53 65 72 69 65 73 20 6E 6F 74 20 63 75 72 72 65 6E 74 6C 79 20 74 72 61 64 69 6E 67 00	Series not currently trading
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	02	Two bitfields to follow
<i>Bitfields</i>		No bitfields from byte 1
<i>ReturnBitfield1</i>	00	Symbol
<i>ReturnBitfield2</i>	01	00Q0kA
<i>Symbol</i>	30 30 51 30 6B 41 00 00	

### 4.2.6 Quote Update Rejected Message Fields

Quote Update Rejected messages are sent in response to a Quote Update message when the entire quote block is rejected by the order handler. No existing quotes are updated or cancelled as a result.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x58
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>QuoteUpdateID</i>	18	16	Text	Echoed back from the Quote Update request.
<i>QuoteRejectReason</i>	34	1	Text	Reason for rejection of an entire Quote Update message.  See <b>Quote Reason Codes</b> for a list of possible quote reject codes.  Additional reasons may be added in the future without warning.
<i>Reserved</i>	35	17	Binary	Reserved for future expansion. Filled with 0.

### Quote Update Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	32 00	50 bytes
<i>MessageType</i>	58	Quote Update Rejected
<i>MatchingUnit</i>	0	Unsequenced message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>QuoteRejectReason</i>	4D	M = symbols not on same matching engine
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved

### 4.2.7 Order Modified Message Fields

Order Modified messages are sent in response to a Modify Request message to indicate that the order has been successfully modified.

**Note: You must opt-in to receiving LeavesQty in Order Modified messages.** In some cases, the last message to be received on an order's lifecycle will be an Order Modified message. The way to know the order is no longer live is to inspect LeavesQty. An example of this would be modification of an order whilst an execution is being generated, resulting in the order being reduced to zero outstanding quantity.

Permitted return optional fields are described in Section 6.5 – Order Modified.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x27
<i>MatchingUnit</i>	5	1	Binary	The Matching Unit which created this message. Matching units in BOE correspond to Matching Units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per Matching Unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	Client order ID. This is the <i>ClOrdID</i> from the Modify Order message.
<i>OrderID</i>	38	8	Binary	Corresponds to <i>OrderID</i> (37) in Cboe FIX.  The unique <i>OrderID</i> . Modifications do <i>not</i> change the <i>OrderID</i> .
<i>ReservedInternal</i>	46	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	47	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	48	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Order Modified Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	35 00	63 bytes
<i>MessageType</i>	27	Order Modified
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02 00	171WC1000005 (base 36)
<i>ReservedInternal</i>	05	Ignore
<i>NumberOfReturn</i>		Five bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield1</i>	04	<i>Price</i>
<i>ReturnBitfield2</i>	00	No fields from byte 2
<i>ReturnBitfield3</i>	00	No fields from byte 3
<i>ReturnBitfield4</i>	00	No fields from byte 4
<i>ReturnBitfield5</i>	02	<i>LeavesQty</i>
<i>Price</i>	08 E2 01 00 00 00 00 00	12.34
<i>LeavesQty</i>	00 00 00 00	0 (order done)

### 4.2.8 Order Restated Message Fields

Order Restated messages are sent to inform the Member that an order has been asynchronously modified for some reason without an explicit Modify Order message request having been sent. Some example (non-exhaustive) reasons for Order Restated messages being sent:

- A reserve (iceberg) order has been reloaded [BZX, C1, and C2 Only].
- An order's remaining quantity was decremented because of a prevented wash trade.
- An order is represented on the Cboe Options Trading Floor [C1 Only].
- A routed order has returned to rest on the book after matching liquidity on another market.

Members should be prepared to accept and apply Order Restated messages for any reason. The return bitfields indicate the characteristics of the order which have changed. Optional fields will be present at the end of the message with the new values.

**Note:** You must opt-in to receiving LeavesQty in Order Restated messages. In some cases, the last message to be received on an order's lifecycle will be an Order Restated message. The way to know the order is no longer live is to inspect LeavesQty. An example of this would be restatement of an order in some cases due to PreventMatch being set to 'd'.

Permitted return optional fields are described in Section 6.6 – Order Restated.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the StartOfMessage field.
<i>MessageType</i>	4	1	Binary	0x28
<i>MatchingUnit</i>	5	1	Binary	The Matching Unit which created this message. Matching units in BOE correspond to Matching Units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per Matching Unit.

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<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	The <i>ClOrdID</i> is the identifier from the open order.
<i>OrderID</i>	38	8	Binary	Corresponds to <i>OrderID</i> (37) in Cboe FIX.  The unique <i>OrderID</i> . For informational purposes only. Restatements do <i>not</i> change the <i>OrderID</i> .
<i>RestatementReason</i>	46	1	Alphanumeric	<p>The reason for this Order Restated message.</p> <p>E = Reduction of OrdQty due to Equity Leg Reject (C1 only)  F = Represented on Floor (C1 only)  L = Reload  P = Price Sliding Reprice  Q = Liquidity Updated  R = Reroute  S = Ship and Post (SWP)  W = Wash  f = Unsolicited Floor Action (C1 only)</p> <p>Cboe reserves the right to add new values as necessary without prior notice.</p>
<i>ReservedInternal</i>	47	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	48	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	49	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### **Order Restated Message for a Reserve (Iceberg) Reload Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	41 00	65 bytes
<i>MessageType</i>	28	Order Restated
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>RestatementReason</i>	4C	L = Reload
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturnBitfields</i>	06	Six bitfields to follow
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	00	No fields from byte 2
<i>ReturnBitfield3</i>	00	No fields from byte 3
<i>ReturnBitfield4</i>	00	No fields from byte 4
<i>ReturnBitfield5</i>	02	<i>LeavesQty</i>
<i>ReturnBitfield6</i>	01	<i>SecondaryOrderID</i>
<i>LeavesQty</i>	64 00 00 00	100 contracts
<i>SecondaryOrderID</i>	0A 10 1E B7 5E 39 2F 02	171WC100000A (base 36)

#### 4.2.9 Quote Restated Message Fields

Quote Restated messages are sent to inform the Member that an order has been asynchronously modified for some reason by the Exchange. For quotes, this could happen if the MTP decrement method has been used by an inbound order against a resting quote. On BZX Options, if a hidden working price is covered by an inbound post only order or quote, a restatement will also occur. Additional reasons may be added in the future.

This message may be expanded in length in the future with new fields added to the end. To maintain forward compatibility, be prepared to receive a message longer than the documented length and to gracefully ignore those extra fields.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x52
<i>MatchingUnit</i>	5	1	Binary	The Matching Unit which created this message. Matching units in BOE correspond to Matching Units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per Matching Unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>QuoteUpdateID</i>	18	16	Text	Echoed back from the most recent <i>Quote Update</i> request for this quote.
<i>OrderID</i>	34	8	Binary	Corresponds to <i>OrderID</i> (37) in Cboe FIX.  The unique <i>OrderID</i> . For informational purposes only. Restatements do not change the <i>OrderID</i> .
<i>LeavesQty</i>	42	4	Binary	New quantity available for execution
<i>WorkingPrice</i>	46	8	Binary	New working price
<i>Symbol</i>	54	6	Alphanumeric	Cboe native identifier
<i>Side</i>	60	1	Alphanumeric	1 = Buy 2 = Sell
<i>RestatementReason</i>	61	1	Alphanumeric	The reason for this Quote Restated message.  K = Price sliding reprice (BZX only) Q = Liquidity W = Wash  Cboe reserves the right to add new values as necessary without prior notice.

#### Quote Restated Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	3C 00	60 bytes
<i>MessageType</i>	52	Quote Restated
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>LeavesQty</i>	14 00 00 00	20 contracts

<i>WorkingPrice</i>	AC 07 01 00 00 00 00 00	6.75
<i>Symbol</i>	30 30 34 63 53 73	004cSs
<i>Side</i>	31	1 = Buy
<i>RestatementReason</i>	4C	L = Reload

#### 4.2.10 User Modify Rejected Message Fields

User Modify Rejected messages are sent in response to a Modify Order message for an order which cannot be modified. User Modify Rejected messages are unsequenced.

This message corresponds to a FIX Execution Report with *MsgType* (35) = 9 (Order Cancel Reject) and *CxlRejResponseTo* (434) = 2 (Order Cancel/Replace Request).

Permitted return optional fields are described in Section 6.7 – User Modify Rejected.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x29
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	The <i>ClOrdID</i> of the modify request which was rejected.
<i>ModifyReject Reason</i>	38	1	Text	Reason for a modify rejection. See <b>Order Reason Codes</b> for a list of possible reasons.
<i>Text</i>	39	60	Text	Human readable text with more information about the reject reason.
<i>ReservedInternal</i>	99	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	100	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	101	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### User Modify Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	63 00	99 bytes
<i>MessageType</i>	29	User Modify Rejected
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000

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<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 ABC123 00 00 00 00 00 00 00 00 00 00
<i>ModifyRejectReason</i>	50 Pending Fill
<i>Text</i>	50 65 6E 64 69 6E 67 00 00 00 Pending 00
<i>ReservedInternal</i>	00 Ignore
<i>NumberOfReturn</i>	00 No optional fields
<i>Bitfields</i>	

#### 4.2.11 Order Cancelled Message Fields

An order has been cancelled. Permitted return optional fields are described in Section 6.8 – Order Cancelled.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x2A
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	The order which was cancelled.
<i>CancelReason</i>	38	1	Text	Reason for the order cancellation.  See <b>Order Reason Codes</b> for a list of possible reasons.
<i>ReservedInternal</i>	39	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn</i>	40	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	41	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### Order Cancelled Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	48 00	72 bytes
<i>MessageType</i>	2A	Order Cancelled
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 ABC123	

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	00 00 00 00 00 00 00 00 00 00 00 00	
<i>CancelReason</i>	55	U = User Requested
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>		
<i>Bitfields</i>	05	Five bitfields to follow
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	00	No fields from byte 2
<i>ReturnBitfield3</i>	06	<i>ClearingFirm, ClearingAccount</i>
<i>ReturnBitfield4</i>	00	No fields from byte 4
<i>ReturnBitfield5</i>	01	<i>OrigClOrdID</i>
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>ClearingAccount</i>	31 32 33 34	1234
<i>OrigClOrdID</i>	41 42 43 31 32 31 00 00 00 00 ABC121 00 00 00 00 00 00 00 00 00 00	

#### 4.2.12 Quote Cancelled Message Fields

A Quote Cancelled message will be sent to indicate an unsolicited cancellation of a quote entered with a Quote Update message. An unsolicited cancellation is used, for example, when a resting quote is cancelled due to MTP with an inbound order or quotes are being cancelled due to a risk trip.

This message may be expanded in length in the future with new fields added to the end. To maintain forward compatibility, be prepared to receive a message longer than the documented length and to gracefully ignore those extra fields.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x53
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. <i>MatchingUnit</i> will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. <i>SequenceNumber</i> will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>QuoteUpdateID</i>	18	16	Text	Echoed back from the most recent <i>Quote Update</i> request for this quote.
<i>OrderID</i>	34	8	Binary	Order ID assigned by the matching engine
<i>Symbol</i>	42	6	Alphanumeric	Cboe native identifier
<i>Side</i>	48	1	Alphanumeric	1 = Buy 2 = Sell
<i>CancelReason</i>	49	1	Text	Reason for the quote cancellation.  See <b>Order Reason Codes</b> for a list of possible reasons.
<i>CancelSubreason</i>	50	1	Text	Additional detail for the quote cancellation.  See <b>Order and Quote Subreason Codes</b> for a list of possible reasons.

### Quote Cancelled Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	31 00	49 bytes
<i>MessageType</i>	53	Quote Cancelled
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>Symbol</i>	30 30 36 69 70 41	006ipA
<i>Side</i>	32	2 = Sell
<i>CancelReason</i>	55	U = User
<i>CancelSubreason</i>	42	B = Purge/mass cancel symbol level by user

### 4.2.13 Cross Order Cancelled Message Fields (C1 and EDGX Only)

A New Order Cross message has been cancelled. Individual order allocations from the original New Order Cross and New Order Cross Multileg message will be echoed back in the repeating groups.

In each repeating group, the *ClOrdrID* and *OrderId* are always returned. Beyond that, the bits specified in the optional return bitfields parameter group control which fields are returned. Any fields that appear in the repeating groups will not appear in the optional fields that come after the repeating groups.

Permitted return optional fields are described in Section 6.9 – Cross Order Cancelled.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x46
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CrossID</i>	18	20	Text	The cross order which was cancelled.
<i>CancelReason</i>	38	1	Text	Reason for the order cancellation. See <b>Order Reason Codes</b> for a list of possible reasons.
<i>ReservedInternal</i>	39	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	40	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	41	1	Binary	Bitfield identifying fields to return.
...				

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<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>GroupCnt</i>		2	Binary	Number of order allocations represented by repeating groups included in this message.
<i>Repeating Groups of...</i>				
<i>CIOrlD</i>		20	Text	Copied from original cross order.
<i>OrderID</i>		8	Binary	The order id of the cross order that was cancelled.
<i>Side (Optional)</i>		1	Alphanumeric	See <a href="#">List of Optional Fields</a> .
<i>AllocQty (Optional)</i>		4	Binary	See <a href="#">List of Optional Fields</a> .
<i>Capacity (Optional)</i>		1	Alpha	See <a href="#">List of Optional Fields</a> .
<i>OpenClose (Optional)</i>		1	Alphanumeric	See <a href="#">List of Optional Fields</a> .
<i>GiveUpFirmID (Optional)</i>		4	Alpha	See <a href="#">List of Optional Fields</a> .
<i>Account (Optional)</i>		16	Text	See <a href="#">List of Optional Fields</a> .
<i>CMTANumber (Optional)</i>		4	Binary	See <a href="#">List of Optional Fields</a> .
<i>ClearingAccount (Optional)</i>		4	Text	See <a href="#">List of Optional Fields</a> .
<i>Optional fields...</i>				Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

#### Cross Order Cancelled Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	8A 00	138 bytes
<i>MessageType</i>	46	Cross Order Cancelled
<i>MatchingUnit</i>	02	Matching Unit 2
<i>SequenceNumber</i>	01 00 00 00	Sequence number 1
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrlD</i>	4E 5A 31 56 37 42 4A 5F 41 63 63 65 70 74 42 75 79 00 00 00	NZ1V7BJ_AcceptBuy
<i>CancelReason</i>	55	U = User Requested
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>		
<i>Bitfields</i>	02	Two bitfields to follow
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	41	<i>Symbol, Capacity</i>
<i>GroupCnt</i>	03 00	Two repeating groups to follow
<i>CIOrlD</i>	4E 5A 31 56 37 47 4E 5F 61 67 65 6E 63 79 00 00 00 00 00 00	NZ1V7GN_agency
<i>OrderID</i>	02 C0 91 A2 94 AB 78 04	2G4GYK000002 (base 36)
<i>Capacity</i>	43	C = Customer
<i>CIOrlD</i>	4E 5A 31 56 37 4B 46 5F 63 6F 6E 74 72 61 31 00 00 00 00 00	NZ1V7KF_contra1
<i>OrderID</i>	03 C0 91 A2 94 AB 78 04	2G4GYK000003 (base 36)

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<i>Capacity</i>	46	F = Firm
<i>CIOrderID</i>	4E 5A 31 56 37 4E 48 5F 63 6F 6E 74 72 61 32 00 00 00 00 00	NZ1V7NH_contra2
<i>OrderID</i>	04 C0 91 A2 94 AB 78 04	2G4GYK000004 (base 36)
<i>Capacity</i>	46	F = Firm
<i>Symbol</i>	30 30 51 30 6B 41 00 00	00Q0kA

#### 4.2.14 Cancel Rejected Message Fields

A Cancel Rejected message is sent in response to a Cancel Order message to indicate that the cancellation cannot occur. Cancel Rejected messages are unsequenced.

Permitted return bitfields are described in Section 6.10 – Cancel Rejected.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x2B
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CIOrId</i>	18	20	Text	The order whose cancel was rejected.
<i>CancelRejectReason</i>	38	1	Text	Reason for the order cancellation. See <b>Order Reason Codes</b> for a list of possible reasons.
<i>Text</i>	39	60	Text	Human readable text with more information about the reject reason.
<i>ReservedInternal</i>	99	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	100	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	101	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### Cancel Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	63 00	99 bytes
<i>MessageType</i>	2B	Cancel Rejected
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrId</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>CancelRejectReason</i>	4A	J

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<i>Text</i>	54 4F 4F 20 4C 41 54 45 00 00    TOO LATE 00
<i>ReservedInternal</i>	00
<i>NumberOfReturn</i>	00
<i>Bitfields</i>	Ignore No optional fields

#### 4.2.15 Order Execution Message Fields

An Order Execution message is sent for each fill on an order.

Rather than returning a monetary value indicating the rebate or charge for an execution, the *FeeCode* is an indication of a fee classification corresponding to an item on the venue's fee schedule.

For executions involving complex orders (C1, C2, and EDGX only), an Order Execution message will be generated for the complex order, with *MultilegReportingType* = 3, followed by Order Execution messages for each leg, with *MultilegReportingType* = 2. You must opt-in to receiving this optional field on Order Execution messages at login in order to receive this field. If both sides of a complex/spread trade are on the same order entry session, Cboe does not guarantee that the leg executions will not be interleaved between sides.

The symbology used on executions for complex orders, including the legs, will **always** be Cboe symbology.

Permitted return bitfields are described in Section 6.12 – Order Execution.

Field	Offset	Length	Data Type	Description								
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.								
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.								
<i>MessageType</i>	4	1	Binary	0x2C								
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.								
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.								
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).								
<i>ClOrdID</i>	18	20	Text	Order receiving the execution.								
<i>ExecID</i>	38	8	Binary	Corresponds to <i>ExecID</i> (17) in Cboe FIX.  Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on ODRSP and FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.  Example conversion: <table border="1" style="margin-left: 20px;"><tr><th>Decimal</th><th>Base 36</th></tr><tr><td>28294005440239</td><td>A1234B567</td></tr><tr><td>76335905726621</td><td>R248BC23H</td></tr><tr><td>728557228187</td><td>09AP05V2Z</td></tr></table>	Decimal	Base 36	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
Decimal	Base 36											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>LastShares</i>	46	4	Binary	Corresponds to <i>LastShares</i> (32) in Cboe FIX.  Executed share quantity.								

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<i>LastPx</i>	50	8	Binary Price	Corresponds to <i>LastPx</i> (31) in Cboe FIX.  Price of this fill. Note the use of <i>Binary Price</i> type to represent positive and negative prices, which can occur with complex instruments.
<i>LeavesQty</i>	58	4	Binary	Corresponds to <i>LeavesQty</i> (151) in Cboe FIX.  Quantity still open for further execution. If zero, the order is complete.
<i>BaseLiquidityIndicator</i>	62	1	Alphanumeric	Indicates whether the trade added or removed liquidity.  A = Added Liquidity R = Removed Liquidity X = Routed to Another Market C = Auction/Uncrossing
<i>SubLiquidityIndicator</i>	63	1	Alphanumeric	<b>Cboe may add additional values without notice. Members must gracefully ignore unknown values.</b>  ASCII NUL (0x00) = No additional information S = Execution from order that set the NBBO B = Step Up Mechanism <b>(C1 and EDGX Only)</b> U = Market Turner <b>(C1 Only)</b> b = AIM <b>(C1 and EDGX Only)</b> Q = QCC <b>(C1 and EDGX Only)</b> s = SAM <b>(C1 and EDGX Only)</b> P = PCC <b>(C1 Only)</b> F = RFC <b>(C1 Only)</b>
<i>ContraBroker</i>	64	4	Alphanumeric	Corresponds to <i>ContraBroker</i> (375) in Cboe FIX.  <b>Simple Instrument Fills</b> Internally matched simple executions will identify the OCC clearing number of the contra on the execution. This includes leg fill reports ( <i>MultilegReportingType</i> =2) that are sent as a result of a complex trade.  Executions matched on the C1 trading floor will contain a value of 'FBKR' for <i>ContraBroker</i> for the first reporter of a Broker to Broker floor trade otherwise, this will identify the OCC clearing number of the contra <b>(C1 only)</b> .  <b>Complex Package Fills</b> <i>ContraBroker</i> will be sent and populated on electronic, complex package fills ( <i>MultilegReportingType</i> =3) when the contra side is also a complex order. When legging in to the simple books <i>ContraBroker</i> will be blank.  <i>ContraBroker</i> will be blank on complex package fills ( <i>MultilegReportingType</i> =3) executed on the Cboe Options trading floor <b>(C1 only)</b> .  <b>Routed Fills</b> All externally matched (routed, <i>BaseLiquidityIndicator</i> =X) executions will identify the away exchange with the following possible values.  AMEX = Routed to NYSE American ARCA = Routed to NYSE Arca

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				BATS = Routed to Cboe BZX Options BOX = Routed to BOX CBOE = Routed to Cboe Options CTWO = Routed to C2 Options EDGX = Routed to Cboe EDGX Options EMLD = Routed to MIAx Emerald GMNI = Routed to Nasdaq GEMX ISE = Routed to Nasdaq ISE MEMX = Routed to MEMX MERC = Routed to Nasdaq MRX MIAx = Routed to MIAx Options Exchange NOMX = Routed to Nasdaq NOBX = Routed to Nasdaq BX PERL = Routed to MIAx PEARL PHLX = Routed to Nasdaq PHLX SPHR = Routed to MIAx Sapphire
<i>ReservedInternal</i>	68	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	69	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	70	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

### Order Execution Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	53 00	83 bytes
<i>MessageType</i>	2C	Order Execution
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>LastShares</i>	64 00 00 00	100 contracts
<i>LastPx</i>	08 E2 01 00 00 00 00 00	12.34
<i>LeavesQty</i>	14 00 00 00	20 contracts
<i>BaseLiquidityIndicator</i>	41	A = Added
<i>SubLiquidityIndicator</i>	00	(unset)
<i>ContraBroker</i>	42 41 54 53	BATS
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturnBitfields</i>	03	Three bitfields to follow
<i>ReturnBitfield1</i>	00	No bitfields from byte 1
<i>ReturnBitfield2</i>	00	No bitfields from byte 2
<i>ReturnBitfield3</i>	46	<i>ClearingFirm</i> , <i>ClearingAccount</i> , <i>OrderQty</i>
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>ClearingAccount</i>	31 32 33 43	1234
<i>OrderQty</i>	78 00 00 00	120 contracts

#### 4.2.16 Quote Execution Message Fields

A `Quote Execution` message is used to indicate an execution has occurred on a resting quote.

This message may be expanded in length in the future with new fields added to the end. To maintain forward compatibility, be prepared to receive a message longer than the documented length and to gracefully ignore those extra fields.

Field	Offset	Length	Data Type	Description								
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.								
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.								
<i>MessageType</i>	4	1	Binary	0x54								
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.								
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.								
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).								
<i>QuoteUpdateID</i>	18	16	Text	Echoed back from the most recent <code>Quote Update</code> request for this quote.								
<i>OrderID</i>	34	8	Binary	Order ID assigned by the matching engine								
<i>ExecID</i>	42	8	Binary	<p>Corresponds to <i>ExecID</i> (17) in Cboe FIX.</p> <p>Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.</p> <p>Example conversion:</p> <table border="1"> <thead> <tr> <th>Decimal</th> <th>Base 36</th> </tr> </thead> <tbody> <tr> <td>28294005440239</td> <td>A1234B567</td> </tr> <tr> <td>76335905726621</td> <td>R248BC23H</td> </tr> <tr> <td>728557228187</td> <td>09AP05V2Z</td> </tr> </tbody> </table>	Decimal	Base 36	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
Decimal	Base 36											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>Symbol</i>	50	6	Alphanumeric	Cboe native identifier								
<i>ClearingFirm</i>	56	4	Alpha	Echoed back from the original quote								
<i>LastShares</i>	60	4	Binary	<p>Corresponds to <i>LastShares</i> (32) in Cboe FIX.</p> <p>Number of contracts being traded.</p>								
<i>LastPx</i>	64	8	Binary Price	<p>Corresponds to <i>LastPx</i> (31) in Cboe FIX.</p> <p>Price of this fill.</p>								
<i>LeavesQty</i>	72	4	Binary	<p>Corresponds to <i>LeavesQty</i> (151) in Cboe FIX.</p> <p>Quantity still open for further execution. If zero, the order is complete.</p>								
<i>ContraTrader</i>	76	4	Alphanumeric	Displays the EFID ( <i>ClearingFirm</i> ) of the contra side firm.								
<i>ContraCapacity</i>	80	1	Alphanumeric	Capacity of the contra for this execution.								
<i>Side</i>	81	1	Alpha	1 = Buy 2 = Sell								
<i>BaseLiquidity Indicator</i>	82	1	Alpha	Indicates whether the trade added or removed liquidity.								

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				A = Added Liquidity R = Removed Liquidity C = Auction/Uncrossing
<i>SubLiquidityIndicator</i>	83	1	Alpha	<b>Cboe may add additional values without notice.</b> <b>Members must gracefully ignore unknown values.</b>  ASCII NUL (0x00) = No additional information S = Execution from order that set the NBBO B = Step Up Mechanism (C1 and EDGX Only) b = AIM (C1 and EDGX Only) Q = QCC (C1 and EDGX Only) s = SAM (C1 and EDGX Only)
<i>FeeCode</i>	84	2	Alphanumeric	Corresponds to <i>FeeCode</i> (9882) in Cboe FIX.
<i>MarketingFeeCode</i>	86	2	Alphanumeric	Corresponds to <i>MarketingFeeCode</i> (5937) in Cboe FIX.  <b>EDGX Only.</b> Will be blank on other Exchanges.

#### **Quote Execution Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	56 00	86 bytes
<i>MessageType</i>	54	Quote Execution
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>QuoteUpdateID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Symbol</i>	30 30 36 69 70 41	006ipA
<i>ClearingFirm</i>	41 42 43 44	ABCD
<i>LastShares</i>	64 00 00 00	100 contracts
<i>LastPx</i>	70 17 00 00 00 00 00 00	0.60
<i>LeavesQty</i>	00 00 00 00	0 (order done)
<i>ContraTrader</i>	41 42 43 44	ABCD
<i>ContraCapacity</i>	43	C = Customer
<i>Side</i>	31	1 = Buy
<i>BaseLiquidity Indicator</i>	41	A = Added
<i>SubLiquidityIndicator</i>	4E	N = Normal
<i>FeeCode</i>	41 42	AB
<i>MarketingFeeCode</i>	58 59	XY

#### **4.2.17 Trade Cancel or Correct Message Fields**

Used to relay a trade which has been cancelled (busted) or corrected (price or size change only). The *CorrectedPrice* and optional *CorrectedSize* fields will be set to 0 for cancelled trades and to the new trade price and/or size for corrected trades. Trade Cancel or Correct messages can be sent for same day as well as previous day trades.

Trade cancels or corrections to complex instruments will result in individual Trade Cancel or Correct messages being sent for each leg. No cancels or corrections will be sent for complex instruments.

Permitted return bitfields are described in Section 6.12 – Trade Cancel or Correct.

Field	Offset	Length	Data Type	Description
-------	--------	--------	-----------	-------------

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<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x2D
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	<i>ClOrdID</i> of the order whose fill is being cancelled or corrected.
<i>OrderID</i>	38	8	Binary	Corresponds to <i>OrderID</i> (37) in Cboe FIX. Order whose fill is being cancelled or corrected.
<i>ExecRefID</i>	46	8	Binary	Corresponds to <i>ExecRefID</i> (19) in Cboe FIX. Refers to the <i>ExecID</i> of the fill being cancelled or corrected.
<i>Side</i>	54	1	Alphanumeric	Side of the order.
<i>BaseLiquidity Indicator</i>	55	1	Alphanumeric	Indicates whether the trade added or removed liquidity.  A = Added Liquidity R = Removed Liquidity X = Routed to Another Market C = Auction/Uncrossing
<i>ClearingFirm</i>	56	4	Alpha	Echoed back from the original order.
<i>ClearingAccount</i>	60	4	Text	Echoed back from the original order.
<i>LastShares</i>	64	4	Binary	Number of shares of the trade being cancelled.
<i>LastPx</i>	68	8	Binary Price	Price of the trade being cancelled.  Note the use of <i>Binary Price</i> type to represent positive and negative prices, which can occur with complex instruments.
<i>CorrectedPrice</i>	76	8	Binary Price	For trade corrections, this is the new trade price. For trade breaks, this is set to 0.
<i>OrigTime</i>	84	8	DateTime	Corresponds to <i>OrigTime</i> (42).  The date and time of the original trade, in GMT.
<i>ReservedInternal</i>	92	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	93	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	94	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### Trade Cancel or Correct Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.

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<i>MessageLength</i>	76 00	118 bytes
<i>MessageType</i>	2D	Trade Cancel or Correct
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderID</i>	05 10 1E B7 5E 39 2F 02	171WC1000005 (base 36)
<i>ExecRefID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Side</i>	31	Buy
<i>BaseLiquidity Indicator</i>	41	A = Added
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>ClearingAccount</i>	00 00 00 00	(empty)
<i>LastShares</i>	64 00 00 00	100 contracts
<i>LastPx</i>	70 17 00 00 00 00 00 00 00	0.60
<i>CorrectedPrice</i>	00 00 00 00 00 00 00 00 00	0 (cancelled)
<i>OrigTime</i>	E0 BA 75 95 15 4C EB 11	1,291,209,373,757,324,000
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	04	Four bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	01	<i>Symbol</i>
<i>ReturnBitfield3</i>	00	No fields from byte 3
<i>ReturnBitfield4</i>	17	<i>MaturityDate</i> , <i>StrikePrice</i> , <i>PutOrCall</i> , <i>OpenClose</i>
<i>Symbol</i>	30 30 51 30 6B 41 00 00	00Q0kA
<i>MaturityDate</i>	EF DB 32 01	2011-03-19
<i>StrikePrice</i>	98 AB 02 00 00 00 00 00	17.50
<i>PutOrCall</i>	31	1 = Call
<i>OpenClose</i>	4F	O = Open

#### 4.2.18 Purge Rejected Message Fields

A Purge Rejected message is sent in response to a Purge Orders message to indicate that the mass cancellation cannot occur. Purge Rejected messages are unsequenced.

Permitted return bitfields are described in Section 6.13 – Purge Rejected.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x48
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>PurgeRejectReason</i>	18	1	Text	Reason for a purge rejection. See <b>Order Reason Codes</b> for a list of possible reasons.

<i>Text</i>	19	60	Text	Human readable text with more information about the reject reason.
<i>ReservedInternal</i>	79	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturn Bitfields</i>	80	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sub>1</sub></i>	81	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sub>n</sub></i>		1	Binary	Last bitfield.
<i>Optional fields... .</i>				

### Purge Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	72 00	114 bytes
<i>MessageType</i>	48	Purge Rejected
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>PurgeRejectReason</i>	41	A
<i>Text</i>	41 44 4D 49 4E 00	ADMIN
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn Bitfields</i>	0F	15 bitfields to follow
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	00	No fields from byte 2
<i>ReturnBitfield3</i>	00	No fields from byte 3
<i>ReturnBitfield4</i>	00	No fields from byte 4
<i>ReturnBitfield5</i>	00	No fields from byte 5
<i>ReturnBitfield6</i>	00	No fields from byte 6
<i>ReturnBitfield7</i>	00	No fields from byte 7
<i>ReturnBitfield8</i>	00	No fields from byte 8
<i>ReturnBitfield9</i>	00	No fields from byte 9
<i>ReturnBitfield10</i>	00	No fields from byte 10
<i>ReturnBitfield11</i>	00	No fields from byte 11
<i>ReturnBitfield12</i>	00	No fields from byte 12
<i>ReturnBitfield13</i>	00	No fields from byte 13
<i>ReturnBitfield14</i>	00	No fields from byte 14
<i>ReturnBitfield15</i>	08	<i>MassCancelID</i>
<i>MassCancelID</i>	54 45 53 54 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	TEST

### 4.2.19 Reset Risk Acknowledgment Message Fields

Response to a Reset Risk message request.

Field	Offset	Length	Data Type	Description
-------	--------	--------	-----------	-------------

<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x57
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>RiskStatusID</i>	10	16	Text	Unique identifier for this Reset Risk request. Response message will have this corresponding identifier.
<i>RiskResetResult</i>	26	1	Text	<p>&lt;space&gt; = Ignored; exceeds 1 reset per 100 milliseconds</p> <p>C = Rejected; exceeds Custom Group ID limit</p> <p>D = Rejected; automatic risk resets are disabled</p> <p>E = Rejected; empty <i>ResetRisk</i> field</p> <p>F = Rejected; exceeds firm reset limit</p> <p>I = Rejected; incorrect data center</p> <p>M = Rejected; invalid matching unit</p> <p>S = Rejected; exceeds risk root reset limit</p> <p>U = Rejected; invalid <i>RiskRoot</i></p> <p>Y = Success</p> <p>c = Rejected; invalid EFID/<i>ClearingFirm</i></p> <p>y = Rejected; in replay</p> <p>Additional reject values may be added in the future with no notice.</p>

#### **Risk Reset Acknowledgment Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	19 00	25 bytes
<i>MessageType</i>	57	Risk Reset Acknowledgement
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>RiskStatusID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>RiskResetResult</i>	00	Y = Success

#### **4.2.20 Mass Cancel Acknowledgment Message Fields**

A Mass Cancel Acknowledgment message is an unsequenced message sent when a Cancel Order or Purge Orders message requesting a mass cancellation has completed cancelling all individual orders.

Multiple Mass Cancel Acknowledgment messages will be sent in response to Mass Cancel requests for multi-unit orders (*MassCancelInst*, 2<sup>nd</sup> character = 'I'). An acknowledgement message will be sent for each matching unit followed by a final acknowledgement containing the total number of orders cancelled due to the purge request across all matching units. This final acknowledgement will have a *SourceMatchingUnit* value of '0'.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x36
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application. Message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>MassCancelID</i>	18	20	Text	Copied from the <i>MassCancelID</i> passed on the original Cancel Order or Purge Orders messages. This field corresponds to <i>MassCancelID</i> (7695) in Cboe FIX.
<i>CancelledOrder Count</i>	38	4	Binary	Number of orders cancelled. This field corresponds to <i>CancelledOrderCount</i> (7696) in Cboe FIX.
<i>ReservedInternal</i>	42	1	Binary	Reserved for Cboe internal use.
<i>SourceMatchingUnit</i>	43	1	Binary	Matching unit number on which orders were cancelled by Purge Orders. The default value of this field is '0' unless <i>MassCancelInst</i> , 2 <sup>nd</sup> character = 'I'. This field corresponds to <i>MatchingUnit</i> (25017) in Cboe FIX.

### Mass Cancel Acknowledgment Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA	Start of message bytes.
<i>MessageLength</i>	29 00	41 bytes
<i>MessageType</i>	36	Mass Cancel Acknowledgment
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>MassCancelID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>CancelledOrderCount</i>	63 00 00 00	99 orders were cancelled
<i>ReservedInternal</i>	00	Ignore
<i>SourceMatchingUnit</i>	00	Matching Unit 33

### 4.2.21 Purge Notification Message Fields

A Purge Notification message is an unsequenced message sent when the Acknowledgement Style of a Purge Request is 'A'. One Purge Notification message is sent for each matching unit that cancelled orders for that order entry port.

Permitted return bitfields are described in Section 6.14 – Purge Notification.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x63
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application. Message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time that the mass cancel was completed in the matching engine.
<i>MassCancelID</i>	18	20	Text	Copied from the <i>MassCancelID</i> passed on the original Cancel Order or Purge Orders. This field corresponds to <i>MassCancelID</i> (7695) in Cboe FIX.
<i>CancelledOrder Count</i>	38	4	Binary	Number of orders cancelled from the specified matching unit that originated on this port. This field corresponds to <i>CancelledOrderCount</i> (7696) in Cboe FIX.
<i>SourceMatchingUnit</i>	42	1	Binary	The matching unit on which the orders were cancelled. This field corresponds to <i>MatchingUnit</i> (25017) in Cboe FIX.
<i>ClearingFirm</i>	43	4	Alpha	EFID used to filter the purge. If EFID was not used, this will be blank. This field corresponds to <i>OnBehalfOfCompid</i> (115) in Cboe FIX.
<i>RiskRoot</i>	47	6	Text	Copied from original Purge Orders, if present. This field corresponds to <i>Symbol</i> (55) in Cboe FIX.
<i>MassCancelLockOut</i>	53	1	Alpha	Reported back with the following possible values. Y = Lockout N = No Lockout  This field corresponds to <i>Lockout</i> (7697) in Cboe FIX.
<i>ReservedInternal</i>	54	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitFields</i>	55	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield</i>	56	1	Binary	Bitfield identifying fields to return.
<i>Optional fields...</i>				

### Purge Notification Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA	Start of message bytes.
<i>MessageLength</i>	38 00	56 bytes
<i>MessageType</i>	63	Purge Notification
<i>MatchingUnit</i>	00	Unsequenced Message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced Message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11 41 42 43 31 32 33 00 00 00	1,294,909,373,757,324,000
<i>MassCancelID</i>	00 00 00 00 00 00 00 00 00 00	ABC123
<i>CancelledOrderCount</i>	63 00 00 00	99 orders were cancelled

<i>SourceMatchingUnit</i>	03	Matching Unit 3
<i>ClearingFirm</i>	54 45 53 54	TEST
<i>RiskRoot</i>	4D 53 46 54 00 00	MSFT
<i>MassCancelLockOut</i>	31	Y = lockout
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturnBitfields</i>	0	0

#### 4.2.22 Complex Instrument Accepted Message Fields (C1, C2, and EDGX Only)

The Complex Instrument Accepted message is used to indicate acceptance of a complex strategy. The leg order sent back may differ from the originating request; *RevisedLegs* will indicate if the leg order has been altered from the original request.

Permitted return bitfields are described in Section 6.15 – Complex Instrument Accepted.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x4D
<i>MatchingUnit</i>	5	1	Binary	The matching unit which created this message. Matching units in BOE correspond to matching units on Multicast PITCH.
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message. Distinct per matching unit.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>ClOrdID</i>	18	20	Text	Echoed back from the original request.
<i>Symbol</i>	38	8	Alphanumeric	The complex instrument id.
<i>RevisedLegs</i>	46	1	Alphanumeric	Indicates if the legs on the created complex strategy have been reordered from the original request.  If the legs were reordered, the order of the Open-Close fields on a New Complex Order must be the order returned by the exchange, not the order from the original request.  1 = Legs were not reordered 2 = Legs were reordered
<i>NoOfSecurities</i>	47	4	Binary	Correspondes to <i>NoOfSecurities</i> (8641) in Cboe FIX.  Indicates the number of securities created by the member in the trading session.
<i>ReservedInternal</i>	51	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	52	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	53	1	Binary	Bitfield identifying fields to follow.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>NoLegs</i>		1	Binary	Echoed back from the original request.
Repeating Group <i>ComplexLeg</i> must occur the number of times specified in <i>NoLegs</i> . Each field occurs in each group, in order as shown below. Optional fields occur only if corresponding bits in bitfields are set.				

<i>LegSymbol</i>	8	Alphanumeric	Corresponds to <i>LegSymbol</i> (600) in Cboe FIX.  Entire Cboe format symbol or OSI Root.  <b>Must send <i>LegCFICode</i>, <i>LegMaturityDate</i>, and <i>LegStrikePrice</i> if using OSI format.</b>
<i>LegCFICode</i>	6	Alphanumeric	Corresponds to <i>LegCFICode</i> (608) in Cboe FIX.  CFI Code for leg. Required if <i>LegSymbol</i> is in OSI format.  OP = Options Put OC = Options Call E = Equity
<i>LegMaturityDate</i>	4	Date	Corresponds to <i>LegMaturityDate</i> (611) in Cboe FIX.  Required if <i>LegSymbol</i> is in OSI format.
<i>LegStrikePrice</i>	8	Binary Price	Corresponds to <i>LegStrikePrice</i> (612) in Cboe FIX.  Option strike price. System maximum is 99,999,999. Must be non-negative. Required if <i>LegSymbol</i> is in OSI format.
<i>LegRatioQty</i>	4	Binary	Corresponds to <i>LegRatioQty</i> (623) in Cboe FIX.  Ratio of number of contracts in this leg per order quantity. Accepted values must be between 1 and 999,999.
<i>LegSide</i>	1	Alphanumeric	Corresponds to <i>LegSide</i> (624) in Cboe FIX.  1 = Buy 2 = Sell
<i>Optional fields...</i>			Optional fields as set in the bitmap. Note, optional fields that occur in the repeating groups appear above, repeating per group, not within this block.

### Complex Instrument Accepted Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	7C 00	124 bytes
<i>MessageType</i>	4D	Complex Instrument Accepted
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Symbol</i>	5A 4E 4B 38 46 43 00 00	ZNK8FC
<i>RevisedLegs</i>	31	Legs were not reordered
<i>NoOfSecurities</i>	04 00 00 00	Four complex strategies created by sender
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	0D	13 bitfields to follow
<i>Bitfields</i>		
<i>ReturnBitfield1</i>	00	No fields from byte 1
<i>ReturnBitfield2</i>	00	No fields from byte 2
<i>ReturnBitfield3</i>	00	No fields from byte 3
<i>ReturnBitfield4</i>	00	No fields from byte 4

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<i>ReturnBitfield5</i>	00	No fields from byte 5
<i>ReturnBitfield6</i>	00	No fields from byte 6
<i>ReturnBitfield7</i>	00	No fields from byte 7
<i>ReturnBitfield8</i>	00	No fields from byte 8
<i>ReturnBitfield9</i>	00	No fields from byte 9
<i>ReturnBitfield10</i>	00	No fields from byte 10
<i>ReturnBitfield11</i>	00	No fields from byte 11
<i>ReturnBitfield12</i>	00	No fields from byte 12
<i>ReturnBitfield13</i>	06	<i>LegCFICode</i> , <i>LegMaturityDate</i> , <i>LegStrikePrice</i>
<i>NoLegs</i>	02	Two legs
<i>LegSymbol</i>	4D 53 46 54 00 00 00 00	MSFT
<i>LegMaturityDate</i>	4F 43 00 00 00 00	OC = Option Call
<i>LegStrikePrice</i>	EF DB 32 01	2011-03-19
<i>LegRatioQty</i>	98 AB 02 00 00 00 00 00	17.50
<i>LegSide</i>	02 00 00 00	Ratio of 2
<i>LegSymbol</i>	31	Buy
<i>LegCFICode</i>	4D 53 46 54 00 00 00 00	MSFT
<i>LegMaturityDate</i>	4F 50 00 00 00 00	OP = Option Put
<i>LegStrikePrice</i>	F6 DB 32 01	2011-03-26
<i>LegRatioQty</i>	30 E6 02 00 00 00 00 00	19.00
<i>LegSide</i>	01 00 00 00	Ratio of 1
	32	Sell

**Minimal Complex Instrument Accepted Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	47 00	71 bytes
<i>MessageType</i>	4D	Complex Instrument Accepted
<i>MatchingUnit</i>	03	Matching Unit 3
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Symbol</i>	5A 4E 4B 38 46 43 00 00	ZNK8FC
<i>RevisedLegs</i>	30	Legs accepted as sent
<i>NoOfSecurities</i>	04 00 00 00	Four complex strategies created by sender
<i>NumberOfReturn</i>	00	No bitfields follow
<i>Bitfields</i>		
<i>NoLegs</i>	02	Two legs
<i>LegSymbol</i>	30 30 51 30 6B 41 00 00	00Q0kA
<i>LegRatioQty</i>	02 00 00 00	Ratio of 2
<i>LegSide</i>	31	Buy
<i>LegSymbol</i>	30 30 51 33 6B 43 00 00	00Q3kC
<i>LegRatioQty</i>	01 00 00 00	Ratio of 1
<i>LegSide</i>	32	Sell

#### 4.2.23 Complex Instrument Rejected Message Fields (C1, C2, and EDGX Only)

The Complex Instrument Rejected message is used to indicate that a requested complex strategy has been rejected. Complex Instrument Rejected messages are unsequenced.

Permitted return bitfields are described in Section 6.16 – Complex Instrument Rejected.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x4E
<i>MatchingUnit</i>	5	1	Binary	Unsequenced application message. Matching unit will be set to 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>TransactionTime</i>	10	8	DateTime	The time the event occurred in the Cboe Matching Engine (not the time the message was sent).
<i>CIOrId</i>	18	20	Text	Echoed back from the original request.
<i>OrderRejectReason</i>	38	1	Text	Reason for an order rejection. See <b>Order Reason Codes</b> for a list of possible reasons.
<i>Text</i>	39	60	Text	Human readable text with more information about the reject reason.
<i>NoOfSecurities</i>	99	4	Binary	Indicates the number of securities created by the member in this trading session.
<i>ReservedInternal</i>	103	1	Binary	Reserved for Cboe internal use.
<i>NumberOfReturnBitfields</i>	104	1	Binary	Number of bitfields to follow.
<i>ReturnBitfield<sup>1</sup></i>	105	1	Binary	Bitfield identifying fields to return.
...				
<i>ReturnBitfield<sup>n</sup></i>		1	Binary	Last bitfield.
<i>Optional fields...</i>				

#### Complex Instrument Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes
<i>MessageLength</i>	67 00	103 bytes
<i>MessageType</i>	4E	Complex Instrument Rejected
<i>MatchingUnit</i>	0	Unsequenced message, unit = 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>TransactionTime</i>	E0 FA 20 F7 36 71 F8 11	1,294,909,373,757,324,000
<i>CIOrId</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>OrderRejectReason</i>	44	D
<i>Text</i>	44 75 70 6C 69 63 61 74 65 20	Duplicate CIOrId

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	43 6C 4F 72 64 49 44 00	
<i>NoOfSecurities</i>	04 00 00 00	Four complex strategies created by sender
<i>ReservedInternal</i>	00	Ignore
<i>NumberOfReturn</i>	00	No bitfields follow
<i>Bitfields</i>		

#### 4.2.24 Floor Trade Notification Message Fields (C1 Only)

TPHs having in-person Market Makers on the Cboe trading floor may optionally receive Floor Trade Notification messages. TPHs must request the Enable Floor Trade Notifications port attribute be enabled for one or more floor acronyms in order to receive these messages. TPHs are encouraged to use Floor Trade Confirmation messages to respond to Floor Trade Notification messages if they agree with the terms of the trade. Alternatively, an Add Floor Trade message may be used to enter their version of the floor trade. If the floor trade notification is not known to the Market Maker (for example, if the TPH is misidentified as a contra party to the floor trade), the message can be disregarded; a response is not required. TPHs configured to be automatically endorsed to floor trades will not receive a Floor Trade Notification message; only an Order Executed message.

Field	Offset	Length	Data Type	Description								
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.								
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.								
<i>MessageType</i>	4	1	Binary	0x62								
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.								
<i>SequenceNumber</i>	6	4	Binary	The sequence number for this message.								
<i>ExecID</i>	10	8	Binary	<p>Corresponds to <i>ExecID</i> (17) in Cboe FIX.</p> <p>Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on ODROP and FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.</p> <p>Example conversion:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>Decimal</th> <th>Base 36</th> </tr> <tr> <td>28294005440239</td> <td>A1234B567</td> </tr> <tr> <td>76335905726621</td> <td>R248BC23H</td> </tr> <tr> <td>728557228187</td> <td>09AP05V2Z</td> </tr> </table>	Decimal	Base 36	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
Decimal	Base 36											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>Symbol</i>	18	8	Alphanumeric	<p>Corresponds to <i>Symbol</i> (55) in Cboe FIX.</p> <p>Entire Cboe format symbol or OSI symbol if using long format.</p>								
<i>PutOrCall</i>	26	1	Alphanumeric	Corresponds to <i>PutOrCall</i> (201) in Cboe FIX. 0 = Put								

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				<b>1 = Call</b> NULL (0x00) filled if using Cboe format symbol.
<i>StrikePrice</i>	27	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX. Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.
<i>MaturityDate</i>	35	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX. NULL (0x00) filled if using Cboe format symbol.
<i>OrderQty</i>	39	4	Binary	Corresponds to <i>OrderQty</i> (38) in Cboe FIX. System limit is 999,999 contracts.
<i>Price</i>	43	8	Binary Price	Corresponds to <i>Price</i> (44) in Cboe FIX. Execution price.
<i>Side</i>	51	1	Alphanumeric	Corresponds to <i>Side</i> (54) in Cboe FIX. <b>1 = Buy</b> <b>2 = Sell</b>
<i>ContraTrader</i>	52	4	Alphanumeric	Displays the Contra Trader floor acronym.
<i>FloorTraderAcronym</i>	56	3	Alpha	Floor Acronym of participant submitting trade.
<i>FloorTradeTime</i>	59	8	DateTime	Trade time
<i>TradeThroughAlertType</i>	67	1	Alphanumeric	Corresponds to <i>TradeThroughAlertType</i> (21098) in Cboe FIX.  Indication of a type of trade through. <b>0 = No trade through</b> <b>1 = NBBO</b> <b>2 = BBO (local best bid or offer)</b> <b>3 = SBBO (market quote of complex derived by legs)</b> <b>4 = Book trade through (trade through customer size)</b> <b>5 = Due Diligence trade through</b>
<i>PriceType</i>	68	1	Alphanumeric	Corresponds to <i>PriceType</i> (423) in Cboe FIX. <b>2 = (Default) Price per unit (contract)</b>
<i>Reserved</i>	69	15	Reserved	Reserved

#### **Floor Trade Notification Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	52 00	82 bytes
<i>MessageType</i>	62	Floor Trade Notification
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	64 00 00 00	Sequence number 100
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA

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<i>PutOrCall</i>	00			
<i>StrikePrice</i>	00 00 00 00 00 00 00 00			
<i>MaturityDate</i>	00 00 00 00			
<i>OrderQty</i>	64 00 00 00	100		
<i>Price</i>	C8 32 00 00 00 00 00 00	1.30		
<i>Side</i>	31	1 = Buy		
<i>ContraTrader</i>	41 41 41 41	AAAA		
<i>FloorTraderAcronym</i>	42 42 42	BBB		
<i>FloorTradeTime</i>	68 23 4A 8B 27 12 B4 15	1,563,894,931,654,321,000		
<i>TradeThroughAlertType</i>	30	0 = No trade through		
<i>PriceType</i>	32	2 = Price per unit		
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	Reserved		
	00 00 00 00 00 00 00 00			

#### 4.2.25 Add Floor Trade Rejected Message Fields (C1 Only)

The Add Floor Trade Rejected message is used to indicate that a requested Add Floor Trade message has been rejected. Add Floor Trade Rejected messages are unsequenced.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x5F
<i>MatchingUnit</i>	5	1	Binary	Always 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>ClOrdID</i>	10	20	Text	Echoed back from the original request.
<i>Symbol</i>	30	8	Alphanumeric	Corresponds to <i>Symbol</i> (55) in Cboe FIX.  Entire Cboe format symbol or OSI symbol if using long format.
<i>PutOrCall</i>	38	1	Alphanumeric	Corresponds to <i>PutOrCall</i> (201) in Cboe FIX.  0 = Put 1 = Call  NULL (0x00) filled if using Cboe format symbol.
<i>StrikePrice</i>	39	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX.  Strike Price for option, 0 – 999,999.99  NULL (0x00) filled if using Cboe format symbol.
<i>MaturityDate</i>	47	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX.  NULL (0x00) filled if using Cboe format symbol.
<i>MultilegReportingType</i>	51	1	Alphanumeric	Echoed back from the original request.
<i>ComboOrder</i>	52	1	Alpha	Echoed back from the original request.
<i>Account</i>	53	16	Text	Echoed back from the original request.
<i>ClearingOptionalData</i>	69	16	Text	Echoed back from the original request.

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<i>ClearingAccount</i>	85	4	Text	Echoed back from the original request..
<i>CMTANumber</i>	89	4	Binary	Echoed back from the original request.
<i>FloorTraderAcronym</i>	93	3	Alpha	Echoed back from the original request.
<i>Side</i>	96	1	Alphanumeric	Echoed back from the original request.
<i>OrderQty</i>	97	4	Binary	Echoed back from the original request.
<i>Price</i>	101	8	Binary Price	Echoed back from the original request.
<i>TransactionTime</i>	109	8	DateTime	Echoed back from the original request.
<i>OpenClose</i>	117	1	Alphanumeric	Echoed back from the original request.
<i>FloorTradeTime</i>	118	8	DateTime	Echoed back from the original request.
<i>ContraTrader</i>	126	4	Alphanumeric	Echoed back from the original request.
<i>Reserved</i>	130	16	Reserved	Reserved
<i>RejectText</i>	146	60	Text	Human readable text with more information about the reject reason.

#### Add Floor Trade Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	CC 00	204 bytes
<i>MessageType</i>	5F	Add Floor Trade Rejected
<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>CIOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	
<i>MultilegReportingType</i>	31	1 = Single leg instrument
<i>ComboOrder</i>	4E	N = No
<i>Account</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
<i>ClearingOptionalData</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
<i>ClearingAccount</i>	41 42 43 00	ABC
<i>CMTANumber</i>	00 00 00 00	
<i>FloorTraderAcronym</i>	41 41 41	AAA
<i>Side</i>	31	1 = Buy
<i>OrderQty</i>	64 00 00 00	100 contracts
<i>Price</i>	C8 32 00 00 00 00 00 00	1.30
<i>TransactionTime</i>	00 5C DB E2 27 12 B4 15	1,563,894,933,123,456,000
<i>OpenClose</i>	4F	O = Open
<i>FloorTradeTime</i>	68 23 4A 8B 27 12 B4 15	1,563,894,931,654,321,000
<i>ContraTrader</i>	57 58 59	WXY
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved
<i>RejectText</i>	41 3A 20 46 6C 6F 6F 72 54 72 61 64 65 72 41 63 72 6F 6E 79 6D 3D 41 41 41 20 64 6F 65 73 20 6E 6F 74 20 68 61 76 65 20	A:FloorTraderAcronym=AAA does not have a floor permit

61 20 66 6C 6F 6F 72 20 70 65  
72 6D 69 74 00 00 00 00 00 00

#### 4.2.26 Floor Trade Confirmation Rejected Message Fields (C1 Only)

The Floor Trade Confirmation Rejected message is used to indicate that a requested Floor Trade Confirmation message has been rejected. Floor Trade Confirmation Rejected messages are unsequenced.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x5E
<i>MatchingUnit</i>	5	1	Binary	Always 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>ClOrd</i>	10	20	Text	Echoed back from the original request.
<i>ExecID</i>	30	8	Binary	Echoed back from the original request.
<i>Symbol</i>	38	8	Alphanumeric	Corresponds to <i>Symbol</i> (55) in Cboe FIX. Entire Cboe format symbol or OSI symbol if using long format.
<i>PutOrCall</i>	46	1	Alphanumeric	Corresponds to <i>PutOrCall</i> (201) in Cboe FIX. 0 = Put 1 = Call NULL (0x00) filled if using Cboe format symbol.
<i>StrikePrice</i>	47	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX. Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.
<i>MaturityDate</i>	55	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX. NULL (0x00) filled if using Cboe format symbol.
<i>TransactionTime</i>	59	8	DateTime	Echoed back from the original request.
<i>PriceType</i>	67	1	Alphanumeric	Corresponds to <i>PriceType</i> (423) in Cboe FIX. 2 = (Default) Price per unit (contract)
<i>Reserved</i>	68	15	Reserved	Reserved
<i>RejectText</i>	83	60	Text	Human readable text with more information about the reject reason.

#### Floor Trade Confirmation Rejected Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	8D 00	141 bytes
<i>MessageType</i>	5E	Floor Trade Confirmation Rejected

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<i>MatchingUnit</i>	00	Always 0 for inbound messages
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ExecID</i>	00 00 00 00 00 00 00 00 00 00	
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	
<i>TransactionTime</i>	68 23 4A 8B 27 12 B4 15	1,563,894,931,654,321,000
<i>PriceType</i>	32	2 = Price per unit
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved
<i>RejectText</i>	41 3A 20 45 78 65 63 49 64 3A 20 45 78 65 63 75 74 69 6F 6E 49 64 20 65 6D 70 74 79 00	A: ExecId: ExecutionId empty

#### 4.2.27 Delete Floor Trade Rejected Message Fields (C1 Only)

The Delete Floor Trade Rejected message is used to indicate that a requested Delete Floor Trade message has been rejected. Delete Floor Trade Rejected messages are unsequenced.

Field	Offset	Length	Data Type	Description
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA.
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.
<i>MessageType</i>	4	1	Binary	0x60
<i>MatchingUnit</i>	5	1	Binary	Always 0.
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.
<i>ClOrdID</i>	10	20	Text	Echoed back from the original request.
<i>ExecID</i>	30	8	Binary	Echoed back from the original request.
<i>Symbol</i>	38	8	Alphanumeric	Corresponds to <i>Symbol</i> (55) in Cboe FIX. Entire Cboe format symbol or OSI symbol if using long format.
<i>PutOrCall</i>	46	1	Alphanumeric	Corresponds to <i>PutOrCall</i> (201) in Cboe FIX. 0 = Put 1 = Call NULL (0x00) filled if using Cboe format symbol.
<i>StrikePrice</i>	47	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX. Strike Price for option, 0 – 999,999.99 NULL (0x00) filled if using Cboe format symbol.

Cboe Options Exchanges  
BOE Specification (Version 2.11.68)

<i>MaturityDate</i>	55	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX. NULL (0x00) filled if using Cboe format symbol.
<i>Side</i>	59	1	Alphanumeric	Echoed back from the original request.
<i>Reserved</i>	60	16	Reserved	Reserved
<i>RejectText</i>	76	60	Text	Human readable text with more information about the reject reason.

**Delete Floor Trade Rejected Message Example**

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	86 00	134 bytes
<i>MessageType</i>	60	Delete Floor Trade Rejected
<i>MatchingUnit</i>	00	Always 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00	ABC123
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Symbol</i>	30 30 36 69 70 41 00 00	006ipA
<i>PutorCall</i>	00	
<i>StrikePrice</i>	00 00 00 00 00 00 00 00	
<i>MaturityDate</i>	00 00 00 00	
<i>Side</i>	31	1=Buy
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00	Reserved
<i>RejectText</i>	55 6E 6B 6E 6F 77 6E 20 73 79 6D 62 6F 6C 00	Unknown symbol

#### 4.2.28 Delete Floor Trade Acknowledgement Message Fields (C1 Only)

A Delete Floor Trade Acknowledgment message is an unsequenced message sent when a Delete Floor Trade message requesting has completed.

Field	Offset	Length	Data Type	Description								
<i>StartOfMessage</i>	0	2	Binary	Must be 0xBA 0xBA.								
<i>MessageLength</i>	2	2	Binary	Number of bytes for the message, including this field but not including the two bytes for the <i>StartOfMessage</i> field.								
<i>MessageType</i>	4	1	Binary	0x61								
<i>MatchingUnit</i>	5	1	Binary	Always 0 for inbound (Member to Cboe) messages.								
<i>SequenceNumber</i>	6	4	Binary	Unsequenced application message. Sequence number will be set to 0.								
<i>ClOrdID</i>	10	20	Text	Echoed back from the original request.								
<i>ExecID</i>	30	8	Binary	<p>Corresponds to <i>ExecID</i> (17) in Cboe FIX.</p> <p>Execution ID. Unique across all matching units on a given day. Note: <i>ExecIDs</i> will be represented on ODROP and FIXDROP ports as nine character, base 36 ASCII. Leading zeros should be added if the converted base 36 value is shorter than nine characters.</p> <p>Example conversion:</p> <table border="1"> <thead> <tr> <th>Decimal</th> <th>Base 36</th> </tr> </thead> <tbody> <tr> <td>28294005440239</td> <td>A1234B567</td> </tr> <tr> <td>76335905726621</td> <td>R248BC23H</td> </tr> <tr> <td>728557228187</td> <td>09AP05V2Z</td> </tr> </tbody> </table>	Decimal	Base 36	28294005440239	A1234B567	76335905726621	R248BC23H	728557228187	09AP05V2Z
Decimal	Base 36											
28294005440239	A1234B567											
76335905726621	R248BC23H											
728557228187	09AP05V2Z											
<i>Reserved</i>	68	16	Reserved	Reserved								

#### Delete Floor Trade Acknowledgement Message Example

Field Name	Hexadecimal	Notes
<i>StartOfMessage</i>	BA BA	Start of message bytes.
<i>MessageLength</i>	24 00	82 bytes
<i>MessageType</i>	61	Delete Floor Trade Acknowledgement
<i>MatchingUnit</i>	00	Always 0
<i>SequenceNumber</i>	00 00 00 00	Unsequenced message, sequence = 0
<i>ClOrdID</i>	41 42 43 31 32 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00	ABC123
<i>ExecID</i>	01 F0 B7 D9 71 21 00 00	D19800001 (base 36)
<i>Reserved</i>	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Reserved

## 5 Input Bitfields Per Message

### Legend:

- R Indicates that the field must be specified for a message
- Indicates that the field can be specified for a message
- Indicates that the field cannot be requested for a message
- (Blank) Indicates that the field is not used by Cboe Options and cannot be specified for a message

Input messages that containing invalid fields (i.e., Blank) will be rejected. In the case of rejected input messages, the associated `Reject` message sent back to the customer will contain a 'RejectReason' code non-optional field (See **Order Reason Codes**) and a 'Text' non-optional field containing descriptive text.

## 5.1 New Order

Byte	Bit	Field	
1	1	<i>ClearingFirm</i>	•
	2	<i>ClearingAccount</i>	•
	4	<i>Price</i>	•
	8	<i>ExecInst</i>	•
	16	<i>OrdType</i>	•
	32	<i>TimeInForce</i>	•
	64	<i>MinQty</i>	•
	128	<i>MaxFloor</i>	•
2	1	<i>Symbol</i>	R
	2	<i>SymbolSfx</i>	
	4	<i>Currency</i>	
	8	<i>IdSource</i>	
	16	<i>SecurityId</i>	
	32	<i>SecurityExchange</i>	
	64	<i>Capacity</i>	R
	128	<i>RoutingInst</i>	•
3	1	<i>Account</i>	•
	2	<i>DisplayIndicator</i>	•
	4	(Reserved)	
	8	<i>DiscretionAmount</i>	
	16	<i>PegDifference</i>	
	32	<i>PreventMatch</i>	•
	64	<i>LocateReqd</i>	
	128	<i>ExpireTime</i>	•
4	1	<i>MaturityDate</i>	•
	2	<i>StrikePrice</i>	•
	4	<i>PutOrCall</i>	•
	8	<i>RiskReset</i>	•
	16	<i>OpenClose</i>	•
	32	<i>CMTANumber</i>	•
	64	<i>TargetPartyID</i>	•
	128	(Reserved)	
5	1	<i>SessionEligibility</i>	•
	2	<i>AttributedQuote</i>	•
	4	<i>BookingType</i>	
	8	<i>ExtExecInst</i>	
	16	<i>ClientID</i>	
	32	<i>InvestorID</i>	
	64	<i>ExecutorID</i>	
	128	<i>OrderOrigination</i>	
6	1	<i>DisplayRange</i>	•
	2	<i>StopPx</i>	•
	4	<i>RouteStrategy</i>	•
	8	<i>RouteDeliveryMethod</i>	•
	16	<i>ExDestination</i>	•
	32	<i>EchoText</i>	•
	64	<i>AuctionId</i>	•
	128	<i>RoutingFirmID</i>	•
7	1	<i>AlgorithmicIndicator</i>	
	2	<i>CustomGroupId</i>	•
	4	<i>ClientQualifiedRole</i>	
	8	<i>InvestorQualifiedRole</i>	
	16	<i>ExecutorQualifiedRole</i>	
	32	<i>CtiCode</i>	
	64	<i>ManualOrderIndicator</i>	
	128	<i>OperatorId</i>	
8	1	(Reserved)	
	2	(Reserved)	
	4	<i>ClearingOptionalData</i>	•
	8	<i>ClientIDAttr</i>	•
	16	<i>FrequentTraderID</i>	•
	32	<i>Compression</i>	•
	64	<i>FloorDestination</i>	•
	128	<i>FloorRoutingInst</i>	•
9	1	<i>OrderOrigin</i>	•
	2	<i>ORS</i>	•
	4	<i>PriceType</i>	•
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	<i>CrossTradeFlag</i>	
	128	(Reserved)	
10	1	<i>Held</i>	•
	2	<i>LocateBroker</i>	
	4	(Reserved)	
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	

## 5.2 New Order Cross (C1 and EDGX Only)

Byte	Bit	Field	
1	1	<i>Symbol</i>	R
	2	<i>MaturityDate</i>	•
	4	<i>StrikePrice</i>	•
	8	<i>PutOrCall</i>	•
	16	<i>ExecInst</i>	•
	32	<i>AttributedQuote</i>	•
	64	<i>TargetPartyID</i>	•
	128	<i>PreventMatch</i>	•
2	1	<i>AutoMatch</i>	•
	2	<i>AutoMatchPrice</i>	•
	4	<i>LastPriority</i>	•
	8	<i>Account</i>	•
	16	<i>CMTANumber</i>	•
	32	<i>ClearingAccount</i>	•
	64	<i>RoutingFirmID</i>	•
	128	<i>ClearingOptionalData</i>	•
3	1	<i>ClientIDAttr</i>	•
	2	<i>EquityTradePrice</i>	•
	4	<i>EquityTradeSize</i>	•
	8	<i>EquityTradeVenue</i>	•
	16	<i>EquityTransactTime</i>	•
	32	<i>EquityBuyClearingFirm</i>	•
	64	<i>EquitySellClearingFirm</i>	•
	128	<i>SessionEligibility</i>	•
4	1	<i>Compression</i>	•
	2	<i>ORS</i>	•
	4	<i>FrequentTraderID</i>	•
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	

## 5.3 New Complex Order (C1, C2, and EDGX Only)

Byte	Bit	Field	
1	1	<i>ClearingFirm</i>	•
	2	<i>ClearingAccount</i>	•
	4	<i>Price</i>	•
	8	<i>OrdType</i>	•
	16	<i>TimeInForce</i>	•
	32	<i>Symbol</i>	•
	64	<i>Capacity</i>	•
	128	<i>RoutingInst</i>	•
2	1	<i>Account</i>	•
	2	<i>PreventMatch</i>	•
	4	<i>ExpireTime</i>	•
	8	<i>CMTANumber</i>	•
	16	<i>TargetPartyID</i>	•
	32	<i>AttributedQuote</i>	•
	64	<i>EchoText</i>	•
	128	<i>AuctionId</i>	•
3	1	<i>RoutingFirmID</i>	•
	2	<i>DrillThruProtection</i>	•
	4	<i>RiskReset</i>	•
	8	<i>CustomGroupId</i>	•
	16	<i>LegSide</i>	
	32	<i>EquityPartyID</i>	•
	64	(Reserved)	
	128	<i>ClearingOptionalData</i>	•
4	1	<i>ClientIDAttr</i>	•
	2	<i>FrequentTraderID</i>	•
	4	<i>SessionEligibility</i>	•
	8	<i>MaxFloor</i>	•
	16	<i>DisplayRange</i>	•
	32	<i>ComboOrder</i>	•
	64	<i>Compression</i>	•
	128	<i>EquityExDestination</i>	•
5	1	<i>EquityLegShortSell</i>	•
	2	<i>FloorDestination</i>	•
	4	<i>FloorRoutingInst</i>	•
	8	<i>MultiClassSprd</i>	•
	16	<i>OrderOrigin</i>	•
	32	<i>ORS</i>	•
	64	<i>PriceType</i>	•
	128	<i>StrategyID</i>	•
6	1	(Reserved)	
	2	<i>ExecInst</i>	•
	4	<i>TiedHedge</i>	•
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	
7	1	(Reserved)	
	2	(Reserved)	
	4	(Reserved)	
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	<i>Held</i>	•
8	1	(Reserved)	
	2	<i>CrossInitiator</i>	•
	4	<i>CrossOnBehalfOfID</i>	•
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	

## 5.4 New Order Cross Multileg (C1 and EDGX Only)

Byte	Bit	Field	
1	1	<i>Symbol</i>	R
	2	(Reserved)	
	4	(Reserved)	
	8	(Reserved)	
	16	<i>ExecInst</i>	•
	32	<i>AttributedQuote</i>	•
	64	<i>TargetPartyID</i>	•
	128	<i>PreventMatch</i>	•
	1	<i>AutoMatch</i>	•
2	2	<i>AutoMatchPrice</i>	•
	4	<i>LastPriority</i>	•
	8	<i>Account</i>	•
	16	<i>CMTANumber</i>	•
	32	<i>ClearingAccount</i>	•
	64	<i>RoutingFirmID</i>	•
	128	<i>ClearingOptionalData</i>	•
	1	<i>ClientIDAttr</i>	•
	2	<i>EquityTradePrice</i>	•
3	4	<i>EquityTradeSize</i>	•
	8	<i>EquityTradeVenue</i>	•
	16	<i>EquityTransactTime</i>	•
	32	<i>EquityBuyClearingFirm</i>	•
	64	<i>EquitySellClearingFirm</i>	•
	128	<i>SessionEligibility</i>	•
	1	<i>EquityPartyId</i>	•
	2	<i>EquityLegShortSell</i>	•
	4	<i>Reserved</i>	
4	8	<i>Reserved</i>	
	16	<i>DrillThruProtection</i>	•
	32	<i>PriceType</i>	
	64	<i>EquityExDestination</i>	•
	128	<i>Compression</i>	•
	1	<i>ORS</i>	•
	2	<i>FrequentTraderID</i>	•
	4	<i>CrossInitiator</i>	•
	8	<i>LegPositionEffectsExt</i>	•
5	16	<i>CrossOnBehalfOfID</i>	•
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	
	1	(Reserved)	
	2	(Reserved)	
	4	(Reserved)	
	8	(Reserved)	
	16	(Reserved)	

## 5.5 Cancel Order

Byte	Bit	Field	
1	1	<i>ClearingFirm</i>	•
	2	<i>MassCancelLockout</i>	
	4	<i>MassCancel</i>	
	8	<i>RiskRoot</i>	•
	16	<i>MassCancelID</i>	•
	32	<i>RoutingFirmID</i>	•
	64	<i>ManualOrderIndicator</i>	
	128	<i>OperatorId</i>	
	1	<i>MassCancelInst</i>	•
2	2	<i>Symbol</i>	
	4	<i>SymbolSfx</i>	
	8	<i>SendTime</i>	R
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	
	1	(Reserved)	
	2	(Reserved)	

*ClearingFirm* is required for service bureau ports.

*SendTime* is required for all Cancel Order messages.

## 5.6 Modify Order

Byte	Bit	Field	
1	1	<i>ClearingFirm</i>	•
	2	(Reserved)	
	4	<i>OrderQty</i>	R
	8	<i>Price</i>	R
	16	<i>OrdType</i>	•
	32	<i>CancelOrigOnReject</i>	•
	64	<i>ExecInst</i>	•
	128	<i>Side</i>	-
2	1	<i>MaxFloor</i>	•
	2	<i>StopPx</i>	•
	4	<i>RoutingFirmID</i>	•
	8	<i>ManualOrderIndicator</i>	
	16	<i>OperatorID</i>	
	32	<i>FrequentTraderID</i>	-
	64	(Reserved)	
	128	(Reserved)	

The *OrderQty* and *Price* fields in the optional field block must be present on all `Modify Order` message requests. Messages sent without both fields will be rejected. *Price* is optional for market orders.

*ClearingFirm* is required for service bureau ports.

## 5.7 Purge Orders

Byte	Bit	Field	
1	1	<i>ClearingFirm</i>	•
	2	<i>MassCancelLockout</i>	
	4	<i>MassCancelInst</i>	•
	8	<i>RiskRoot</i>	•
	16	<i>MassCancelID</i>	•
	32	<i>RoutingFirmID</i>	•
	64	<i>ManualOrderIndicator</i>	
	128	<i>OperatorID</i>	
2	1	<i>Symbol</i>	
	2	<i>SymbolSfx</i>	
	4	(Reserved)	
	8	(Reserved)	
	16	(Reserved)	
	32	(Reserved)	
	64	<i>SendTime</i>	R
	128	<i>MatchingUnit</i>	•

*ClearingFirm* is required for service bureau ports.

*SendTime* is required for all `Purge Orders` messages.

## 5.8 New Complex Instrument (C1, C2, and EDGX Only)

Byte	Bit	Field	
1	1	<i>LegCFICode</i>	•
	2	<i>LegMaturityDate</i>	•
	4	<i>LegStrikePrice</i>	•
	8	<i>ClearingFirm</i>	•
	16	(Reserved)	
	32	(Reserved)	
	64	(Reserved)	
	128	(Reserved)	

## 6 Return Bitfields Per Message

### Legend:

- R Indicates that the field must be specified for a message
- Indicates that the field can be specified for a message
- Indicates that the field cannot be requested for a message
- (Blank) Indicates that the field is not used by Cboe Options and cannot be specified for a message

Input messages that containing invalid fields (i.e., Blank) will be rejected. In the case of rejected input messages, the associated Reject message sent back to the customer will contain a 'RejectReason' code non-optional field (See **Order Reason Codes**) and a 'Text' non-optional field containing descriptive text.

## 6.1 Order Acknowledgment

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	SymbolSfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	—
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	•
	2	LeavesQty	•
5	4	LastShares	•
	8	LastPx	•
	16	DisplayPrice	•
	32	WorkingPrice	•
	64	BaseLiquidityIndicator	•
	128	ExpireTime	•
	1	SecondaryOrderID	•
	2	CCP	
6	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIDs	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	•
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	—
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	—
	128	CrossPrioritization	—
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorID	
	8	TradeDate	—
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	—
	2	DayOrderQty	—
	4	DayCumQty	—
	8	AvgPx	—
	16	DayAvgPx	—
	32	PendingStatus	
	64	DrillThruProtection	•
	128	MultilegReportingType	—
	1	LegCFICode	—
	2	LegMaturityDate	—
14	4	LegStrikePrice	—
	8	RoomId	
	16	SecondaryExecID	
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelID	—
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	•
	1	FrequentTraderID	•
	2	SessionEligibility	•
16	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
	1	PriceType	•
	2	StrategyID	•
17	4	TradingSessionID	
	8	TradeThroughAlertType	—
	16	SenderLocationID	—
	32	FloorTraderAcronym	—
	64	ExecLegCFICode	—
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	—
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.2 Cross Order Acknowledgment (C1 and EDGX only)

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	—
	32	TimeInForce	—
	64	MinQty	—
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	—
	1	Account	•
	2	ClearingFirm	—
3	4	ClearingAccount	•
	8	DisplayIndicator	—
	16	MaxFloor	—
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIdBatch	
	32	CorrectedSize	—
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdId	—
	2	LeavesQty	—
5	4	LastShares	—
	8	LastPx	—
	16	DisplayPrice	—
	32	WorkingPrice	—
	64	BaseLiquidityIndicator	—
	128	ExpireTime	—
	1	SecondaryOrderID	—
	2	CCP	
6	4	ContraCapacity	—
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	—
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	—
	2	EchoText	—
8	4	StopPx	—
	8	RoutingInst	—
	16	RoutStrategy	—
	32	RouteDeliveryMethod	—
	64	ExDestination	—
	128	TradeReportRefID	
	1	MarketingFeeCode	—
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	•
	128	CrossPrioritization	•
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	—
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	Operatord	
	8	TradeDate	—
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	—
	2	DayOrderQty	—
	4	DayCumQty	—
	8	AvgPx	—
	16	DayAvgPx	—
	32	PendingStatus	
	64	DrillThruProtection	—
	128	MultilegReportingType	—
	1	LegCFICode	—
	2	LegMaturityDate	—
14	4	LegStrikePrice	—
	8	RoomId	
	16	SecondaryExecId	—
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelId	—
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	•
	1	FrequentTraderID	•
	2	SessionEligibility	—
16	4	ComboOrder	—
	8	Compression	•
	16	FloorDestination	—
	32	FloorRoutingInst	—
	64	MultiClassSprd	—
	128	OrderOrigin	—
	1	PriceType	
	2	StrategyID	—
17	4	TradingSessionId	
	8	TradeThroughAlertType	—
	16	SenderLocationID	—
	32	FloorTraderAcronym	—
	64	ExecLegCFICode	—
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	—
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	—
	64	LocateBroker	
	128	(Reserved)	

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## 6.3 Order Rejected

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	-
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	-
	2	LeavesQty	-
5	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
	1	SecondaryOrderID	•
	2	CCP	
6	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	Operatord	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	•
	1	FrequentTraderID	•
	2	SessionEligibility	•
16	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
	1	PriceType	•
	2	StrategyID	•
17	4	TradingSessionId	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	•
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.4 Cross Order Rejected (C1 and EDGX Only)

Byte	Bit	Field	
1	1	Side	-
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	-
	32	TimeInForce	-
	64	MinQty	-
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	-
	128	ContraTrader	-
	1	Account	-
	2	ClearingFirm	-
3	4	ClearingAccount	-
	8	DisplayIndicator	-
	16	MaxFloor	-
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	-
	16	ClOrdIDBatch	
	32	CorrectedSize	-
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	-
	2	LeavesQty	-
5	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
	1	SecondaryOrderID	-
	2	CCP	
6	4	ContraCapacity	-
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	-
8	4	StopPx	-
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	-
	2	TargetPartyID	•
9	4	AuctionId	-
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	-
	64	CrossType	•
	128	CrossPrioritization	•
	1	CrossId	•
	2	AllocQty	-
10	4	GiveUpFirmID	-
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	-
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	Operatord	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	•
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	•
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	
	2	StrategyID	-
17	4	TradingSessionId	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	•
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 6.5 Order Modified

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	SymbolSfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	-
	128	ContraTrader	-
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	-
	2	StrikePrice	-
4	4	PutOrCall	-
	8	OpenClose	-
	16	ClOrdIDBatch	
	32	CorrectedSize	-
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	•
	2	LeavesQty	•
5	4	LastShares	•
	8	LastPx	•
	16	DisplayPrice	•
	32	WorkingPrice	•
	64	BaseLiquidityIndicator	•
	128	ExpireTime	•
	1	SecondaryOrderID	•
	2	CCP	
6	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIDs	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorID	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecID	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	•
	2	SessionEligibility	-
16	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
	1	PriceType	•
	2	StrategyID	•
17	4	TradingSessionID	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.6 Order Restated

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	SymbolSfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	-
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	•
	2	LeavesQty	•
5	4	LastShares	•
	8	LastPx	•
	16	DisplayPrice	•
	32	WorkingPrice	•
	64	BaseLiquidityIndicator	•
	128	ExpireTime	•
	1	SecondaryOrderID	•
	2	CCP	
6	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIDs	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorID	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecID	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelID	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	•
	1	FrequentTraderID	•
	2	SessionEligibility	-
16	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
	1	PriceType	•
	2	StrategyID	•
17	4	TradingSessionID	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.7 User Modify Rejected

Byte	Bit	Field	
1	1	Side	-
	2	PegDifference	
	4	Price	-
	8	ExecInst	-
	16	OrdType	-
	32	TimeInForce	-
	64	MinQty	-
	128	(Reserved)	
	1	Symbol	-
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	-
	128	ContraTrader	-
	1	Account	-
	2	ClearingFirm	-
3	4	ClearingAccount	-
	8	DisplayIndicator	-
	16	MaxFloor	-
	32	DiscretionAmount	
	64	OrderQty	-
	128	PreventMatch	-
	1	MaturityDate	-
	2	StrikePrice	-
4	4	PutOrCall	-
	8	OpenClose	-
	16	ClOrdIDBatch	
	32	CorrectedSize	-
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	-
	2	LeavesQty	-
5	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
	1	SecondaryOrderID	-
	2	CCP	
6	4	ContraCapacity	-
	8	AttributedQuote	-
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	-
8	4	StopPx	-
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	-
	2	TargetPartyID	-
9	4	AuctionId	-
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	-
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorId	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAtrr	-
	1	FrequentTraderID	-
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	-
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	-
	2	StrategyID	-
17	4	TradingSessionId	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 6.8 Order Cancelled

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
2	1	Symbol	•
	2	SymbolSfx	
	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	—
3	1	Account	•
	2	ClearingFirm	•
	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
4	1	MaturityDate	•
	2	StrikePrice	•
	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
5	1	OrigClOrdID	•
	2	LeavesQty	•
	4	LastShares	•
	8	LastPx	•
	16	DisplayPrice	•
	32	WorkingPrice	•
	64	BaseLiquidityIndicator	•
	128	ExpireTime	•
6	1	SecondaryOrderID	•
	2	CCP	
	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	—
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
8	1	FeeCode	—
	2	EchoText	•
	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
9	1	MarketingFeeCode	•
	2	TargetPartyID	•
	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	—
	128	CrossPrioritization	—
10	1	CrossId	•
	2	AllocQty	•
	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
11	1	ClientID	
	2	InvestorID	
	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
12	1	CtiCode	
	2	ManualOrderIndicator	
	4	OperatorId	
	8	TradeDate	—
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	—
	2	DayOrderQty	—
	4	DayCumQty	—
	8	AvgPx	—
	16	DayAvgPx	—
	32	PendingStatus	
	64	DrillThruProtection	—
	128	MultilegReportingType	—
14	1	LegCFICode	—
	2	LegMaturityDate	—
	4	LegStrikePrice	—
	8	RoomId	
	16	SecondaryExecId	—
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
15	1	TradeReportingIndicator	
	2	EquityPartyId	•
	4	EquityNBBOProtect	
	8	MassCancelId	—
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	—
16	1	FrequentTraderID	•
	2	SessionEligibility	—
	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
17	1	PriceType	•
	2	StrategyID	•
	4	TradingSessionId	
	8	TradeThroughAlertType	—
	16	SenderLocationID	—
	32	FloorTraderAcronym	—
	64	ExecLegCFICode	—
	128	CustOrderHandlingInst	
18	1	(Reserved)	
	2	CrossInitiator	•
	4	Subreason	•
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.9 Cross Order Cancelled (C1 and EDGX Only)

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	—
	32	TimeInForce	—
	64	MinQty	—
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	—
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	—
	8	DisplayIndicator	—
	16	MaxFloor	—
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	—
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	—
	2	LeavesQty	—
5	4	LastShares	—
	8	LastPx	—
	16	DisplayPrice	—
	32	WorkingPrice	—
	64	BaseLiquidityIndicator	—
	128	ExpireTime	—
	1	SecondaryOrderID	—
	2	CCP	
6	4	ContraCapacity	—
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	—
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	—
	2	EchoText	—
8	4	StopPx	—
	8	RoutingInst	—
	16	RoutStrategy	—
	32	RouteDeliveryMethod	—
	64	ExDestination	—
	128	TradeReportRefID	
	1	MarketingFeeCode	—
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	•
	128	CrossPrioritization	•
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	—
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorID	
	8	TradeDate	—
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	—

Byte	Bit	Field	
13	1	CumQty	—
	2	DayOrderQty	—
	4	DayCumQty	—
	8	AvgPx	—
	16	DayAvgPx	—
	32	PendingStatus	
	64	DrillThruProtection	—
	128	MultilegReportingType	—
	1	LegCFICode	—
	2	LegMaturityDate	—
14	4	LegStrikePrice	—
	8	RoomId	
	16	SecondaryExecId	—
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelId	—
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	—
	1	FrequentTraderID	•
	2	SessionEligibility	—
16	4	ComboOrder	—
	8	Compression	•
	16	FloorDestination	—
	32	FloorRoutingInst	—
	64	MultiClassSprd	—
	128	OrderOrigin	—
	1	PriceType	
	2	StrategyID	—
17	4	TradingSessionID	
	8	TradeThroughAlertType	—
	16	SenderLocationID	—
	32	FloorTraderAcronym	—
	64	ExecLegCFICode	—
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	—
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	—
	64	LocateBroker	
	128	(Reserved)	

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## 6.10 Cancel Rejected

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	
	1	Account	
	2	ClearingFirm	
3	4	ClearingAccount	
	8	DisplayIndicator	
	16	MaxFloor	
	32	DiscretionAmount	
	64	OrderQty	
	128	PreventMatch	
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	
	2	LeavesQty	
5	4	LastShares	
	8	LastPx	
	16	DisplayPrice	
	32	WorkingPrice	
	64	BaseLiquidityIndicator	
	128	ExpireTime	
	1	SecondaryOrderID	
	2	CCP	
6	4	ContraCapacity	
	8	AttributedQuote	
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorId	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	-
	1	TradeReportingIndicator	
	2	EquityPartyId	-
15	4	EquityNBBOProtect	
	8	MassCancelId	•
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	-
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	-
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	-
	2	StrategyID	-
17	4	TradingSessionId	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 6.11 Order Execution

Byte	Bit	Field	
1	1	Side	•
	2	PegDifference	
	4	Price	•
	8	ExecInst	•
	16	OrdType	•
	32	TimeInForce	•
	64	MinQty	•
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	•
	1	Account	•
	2	ClearingFirm	•
3	4	ClearingAccount	•
	8	DisplayIndicator	•
	16	MaxFloor	•
	32	DiscretionAmount	
	64	OrderQty	•
	128	PreventMatch	•
	1	MaturityDate	•
	2	StrikePrice	•
4	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	—
	2	LeavesQty	—
5	4	LastShares	—
	8	LastPx	—
	16	DisplayPrice	—
	32	WorkingPrice	—
	64	BaseLiquidityIndicator	—
	128	ExpireTime	—
	1	SecondaryOrderID	—
	2	CCP	
6	4	ContraCapacity	•
	8	AttributedQuote	•
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	—
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	•
	2	EchoText	•
8	4	StopPx	•
	8	RoutingInst	•
	16	RoutStrategy	•
	32	RouteDeliveryMethod	•
	64	ExDestination	•
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	•
	128	CrossPrioritization	•
	1	CrossId	•
	2	AllocQty	•
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorID	
	8	TradeDate	•
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	•

Byte	Bit	Field	
13	1	CumQty	•
	2	DayOrderQty	•
	4	DayCumQty	•
	8	AvgPx	•
	16	DayAvgPx	•
	32	PendingStatus	
	64	DrillThruProtection	•
	128	MultilegReportingType	•
	1	LegCFCODE	—
	2	LegMaturityDate	—
14	4	LegStrikePrice	—
	8	RoomID	
	16	SecondaryExecID	•
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	•
15	4	EquityNBBOProtect	
	8	MassCancelID	—
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	•
	1	FrequentTraderID	•
	2	SessionEligibility	—
16	4	ComboOrder	•
	8	Compression	•
	16	FloorDestination	•
	32	FloorRoutingInst	•
	64	MultiClassSprd	•
	128	OrderOrigin	•
	1	PriceType	•
	2	StrategyID	•
17	4	TradingSessionID	
	8	TradeThroughAlertType	•
	16	SenderLocationID	•
	32	FloorTraderAcronym	•
	64	ExecLegCFCODE	•
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	•
18	4	Subreason	—
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	•
	64	LocateBroker	
	128	(Reserved)	

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## 6.12 Trade Cancel or Correct

Byte	Bit	Field	
1	1	Side	-
	2	PegDifference	
	4	Price	-
	8	ExecInst	-
	16	OrdType	-
	32	TimeInForce	-
	64	MinQty	-
	128	(Reserved)	
	1	Symbol	•
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	•
	128	ContraTrader	-
3	1	Account	-
	2	ClearingFirm	-
	4	ClearingAccount	-
	8	DisplayIndicator	-
	16	MaxFloor	-
	32	DiscretionAmount	
	64	OrderQty	-
	128	PreventMatch	-
4	1	MaturityDate	•
	2	StrikePrice	•
	4	PutOrCall	•
	8	OpenClose	•
	16	ClOrdIDBatch	
	32	CorrectedSize	•
	64	PartyID	
	128	AccessFee	
5	1	OrigClOrdID	-
	2	LeavesQty	-
	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
6	1	SecondaryOrderID	-
	2	CCP	
	4	ContraCapacity	-
	8	AttributedQuote	-
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	•
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	-
8	4	StopPx	-
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	•
	2	TargetPartyID	•
9	4	AuctionId	•
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	•
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	•
	2	AllocQty	-
10	4	GiveUpFirmID	•
	8	RoutingFirmID	•
	16	WaiverType	
	32	CrossExclusionIndicator	•
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorId	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	-
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	-
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	-
	2	StrategyID	-
17	4	TradingSessionId	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 6.13 Purge Rejected

Byte	Bit	Field	
1	1	<i>Side</i>	-
	2	<i>PegDifference</i>	
	4	<i>Price</i>	-
	8	<i>ExecInst</i>	-
	16	<i>OrdType</i>	-
	32	<i>TimeInForce</i>	-
	64	<i>MinQty</i>	-
	128	(Reserved)	
2	1	<i>Symbol</i>	-
	2	<i>SymbolSfx</i>	
	4	<i>Currency</i>	
	8	<i>IdSource</i>	
	16	<i>SecurityId</i>	
	32	<i>SecurityExchange</i>	
	64	<i>Capacity</i>	-
	128	<i>ContraTrader</i>	-
3	1	<i>Account</i>	-
	2	<i>ClearingFirm</i>	-
	4	<i>ClearingAccount</i>	-
	8	<i>DisplayIndicator</i>	-
	16	<i>MaxFloor</i>	-
	32	<i>DiscretionAmount</i>	
	64	<i>OrderQty</i>	-
	128	<i>PreventMatch</i>	-
4	1	<i>MaturityDate</i>	-
	2	<i>StrikePrice</i>	-
	4	<i>PutOrCall</i>	-
	8	<i>OpenClose</i>	-
	16	<i>ClOrdIDBatch</i>	
	32	<i>CorrectedSize</i>	-
	64	<i>PartyID</i>	
	128	<i>AccessFee</i>	
5	1	<i>OrigClOrdID</i>	-
	2	<i>LeavesQty</i>	-
	4	<i>LastShares</i>	-
	8	<i>LastPx</i>	-
	16	<i>DisplayPrice</i>	-
	32	<i>WorkingPrice</i>	-
	64	<i>BaseLiquidityIndicator</i>	-
	128	<i>ExpireTime</i>	-
6	1	<i>SecondaryOrderID</i>	-
	2	<i>CCP</i>	
	4	<i>ContraCapacity</i>	-
	8	<i>AttributedQuote</i>	-
	16	<i>ExtExecInst</i>	
	32	<i>BulkOrderIds</i>	
	64	<i>BulkRejectReasons</i>	
	128	<i>PartyRole</i>	

Byte	Bit	Field	
7	1	<i>SubLiquidityIndicator</i>	-
	2	<i>TradeReportTypeReturn</i>	
	4	<i>TradePublishIndReturn</i>	
	8	<i>Text</i>	
	16	<i>Bid</i>	
	32	<i>Offer</i>	
	64	<i>LargeSize</i>	
	128	<i>LastMkt</i>	
8	1	<i>FeeCode</i>	-
	2	<i>EchoText</i>	-
	4	<i>StopPx</i>	-
	8	<i>RoutingInst</i>	-
	16	<i>RoutStrategy</i>	-
	32	<i>RouteDeliveryMethod</i>	-
	64	<i>ExDestination</i>	-
	128	<i>TradeReportRefID</i>	
9	1	<i>MarketingFeeCode</i>	-
	2	<i>TargetPartyID</i>	-
	4	<i>AuctionId</i>	-
	8	<i>OrderCategory</i>	
	16	<i>LiquidityProvision</i>	
	32	<i>CmtaNumber</i>	-
	64	<i>CrossType</i>	-
	128	<i>CrossPrioritization</i>	-
10	1	<i>CrossId</i>	-
	2	<i>AllocQty</i>	-
	4	<i>GiveUpFirmID</i>	-
	8	<i>RoutingFirmID</i>	-
	16	<i>WaiverType</i>	
	32	<i>CrossExclusionIndicator</i>	-
	64	<i>PriceFormation</i>	
	128	<i>ClientQualifiedRole</i>	
11	1	<i>ClientID</i>	
	2	<i>InvestorID</i>	
	4	<i>ExecutorID</i>	
	8	<i>OrderOrigination</i>	
	16	<i>Algo</i>	
	32	<i>DeferralReason</i>	
	64	<i>InvestorQualifiedRole</i>	
	128	<i>ExecutorQualifiedRole</i>	
12	1	<i>CtiCode</i>	
	2	<i>ManualOrderIndicator</i>	
	4	<i>OperatorId</i>	
	8	<i>TradeDate</i>	-
	16	<i>ClearingPrice</i>	
	32	<i>ClearingSize</i>	
	64	<i>ClearingSymbol</i>	
	128	<i>ClearingOptionalData</i>	-

Byte	Bit	Field	
13	1	<i>CumQty</i>	-
	2	<i>DayOrderQty</i>	-
	4	<i>DayCumQty</i>	-
	8	<i>AvgPx</i>	-
	16	<i>DayAvgPx</i>	-
	32	<i>PendingStatus</i>	
	64	<i>DrillThruProtection</i>	-
	128	<i>MultilegReportingType</i>	-
14	1	<i>LegCfICode</i>	-
	2	<i>LegMaturityDate</i>	-
	4	<i>LegStrikePrice</i>	-
	8	<i>RoomId</i>	
	16	<i>SecondaryExecId</i>	-
	32	<i>UserRequestID</i>	
	64	<i>SISUsername</i>	
	128	<i>UserStatus</i>	
15	1	<i>TradeReportingIndicator</i>	
	2	<i>EquityPartyID</i>	-
	4	<i>EquityNBBOProtect</i>	
	8	<i>MassCancelId</i>	•
	16	<i>TradePublishInd</i>	
	32	<i>ReportTime</i>	
	64	<i>LegSymbolSfx</i>	
	128	<i>ClientIDAttr</i>	-
16	1	<i>FrequentTraderID</i>	-
	2	<i>SessionEligibility</i>	-
	4	<i>ComboOrder</i>	-
	8	<i>Compression</i>	-
	16	<i>FloorDestination</i>	-
	32	<i>FloorRoutingInst</i>	-
	64	<i>MultiClassSpred</i>	-
	128	<i>OrderOrigin</i>	-
17	1	<i>PriceType</i>	-
	2	<i>StrategyID</i>	-
	4	<i>TradingSessionId</i>	
	8	<i>TradeThroughAlertType</i>	-
	16	<i>SenderLocationID</i>	-
	32	<i>FloorTraderAcronym</i>	-
	64	<i>ExecLegCfICode</i>	-
	128	<i>CustOrderHandlingInst</i>	
18	1	(Reserved)	
	2	<i>CrossInitiator</i>	-
	4	<i>Subreason</i>	-
	8	<i>CrossTradeFlag</i>	
	16	(Reserved)	
	32	<i>Held</i>	-
	64	<i>LocateBroker</i>	
	128	(Reserved)	

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## 6.14 Purge Notification

Byte	Bit	Field	
1	1	<i>Side</i>	-
	2	<i>PegDifference</i>	
	4	<i>Price</i>	-
	8	<i>ExecInst</i>	-
	16	<i>OrdType</i>	-
	32	<i>TimeInForce</i>	-
	64	<i>MinQty</i>	-
	128	(Reserved)	
2	1	<i>Symbol</i>	-
	2	<i>SymbolSfx</i>	
	4	<i>Currency</i>	
	8	<i>IdSource</i>	
	16	<i>SecurityId</i>	
	32	<i>SecurityExchange</i>	
	64	<i>Capacity</i>	-
	128	<i>ContraTrader</i>	-
3	1	<i>Account</i>	-
	2	<i>ClearingFirm</i>	-
	4	<i>ClearingAccount</i>	-
	8	<i>DisplayIndicator</i>	-
	16	<i>MaxFloor</i>	-
	32	<i>DiscretionAmount</i>	
	64	<i>OrderQty</i>	-
	128	<i>PreventMatch</i>	-
4	1	<i>MaturityDate</i>	-
	2	<i>StrikePrice</i>	-
	4	<i>PutOrCall</i>	-
	8	<i>OpenClose</i>	-
	16	<i>ClOrdIDBatch</i>	
	32	<i>CorrectedSize</i>	-
	64	<i>PartyID</i>	
	128	<i>AccessFee</i>	
5	1	<i>OrigClOrdID</i>	-
	2	<i>LeavesQty</i>	-
	4	<i>LastShares</i>	-
	8	<i>LastPx</i>	-
	16	<i>DisplayPrice</i>	-
	32	<i>WorkingPrice</i>	-
	64	<i>BaseLiquidityIndicator</i>	-
	128	<i>ExpireTime</i>	-
6	1	<i>SecondaryOrderID</i>	-
	2	<i>CCP</i>	
	4	<i>ContraCapacity</i>	-
	8	<i>AttributedQuote</i>	-
	16	<i>ExtExecInst</i>	
	32	<i>BulkOrderIds</i>	
	64	<i>BulkRejectReasons</i>	
	128	<i>PartyRole</i>	

Byte	Bit	Field	
7	1	<i>SubLiquidityIndicator</i>	-
	2	<i>TradeReportTypeReturn</i>	
	4	<i>TradePublishIndReturn</i>	
	8	<i>Text</i>	
	16	<i>Bid</i>	
	32	<i>Offer</i>	
	64	<i>LargeSize</i>	
	128	<i>LastMkt</i>	
8	1	<i>FeeCode</i>	-
	2	<i>EchoText</i>	-
	4	<i>StopPx</i>	-
	8	<i>RoutingInst</i>	-
	16	<i>RoutStrategy</i>	-
	32	<i>RouteDeliveryMethod</i>	-
	64	<i>ExDestination</i>	-
	128	<i>TradeReportRefID</i>	
9	1	<i>MarketingFeeCode</i>	-
	2	<i>TargetPartyID</i>	-
	4	<i>AuctionId</i>	-
	8	<i>OrderCategory</i>	
	16	<i>LiquidityProvision</i>	
	32	<i>CmtaNumber</i>	-
	64	<i>CrossType</i>	-
	128	<i>CrossPrioritization</i>	-
10	1	<i>CrossId</i>	-
	2	<i>AllocQty</i>	-
	4	<i>GiveUpFirmID</i>	-
	8	<i>RoutingFirmID</i>	-
	16	<i>WaiverType</i>	
	32	<i>CrossExclusionIndicator</i>	-
	64	<i>PriceFormation</i>	
	128	<i>ClientQualifiedRole</i>	
11	1	<i>ClientID</i>	
	2	<i>InvestorID</i>	
	4	<i>ExecutorID</i>	
	8	<i>OrderOrigination</i>	
	16	<i>Algo</i>	
	32	<i>DeferralReason</i>	
	64	<i>InvestorQualifiedRole</i>	
	128	<i>ExecutorQualifiedRole</i>	
12	1	<i>CtiCode</i>	
	2	<i>ManualOrderIndicator</i>	
	4	<i>OperatorId</i>	
	8	<i>TradeDate</i>	-
	16	<i>ClearingPrice</i>	
	32	<i>ClearingSize</i>	
	64	<i>ClearingSymbol</i>	
	128	<i>ClearingOptionalData</i>	-

Byte	Bit	Field	
13	1	<i>CumQty</i>	-
	2	<i>DayOrderQty</i>	-
	4	<i>DayCumQty</i>	-
	8	<i>AvgPx</i>	-
	16	<i>DayAvgPx</i>	-
	32	<i>PendingStatus</i>	
	64	<i>DrillThruProtection</i>	-
	128	<i>MultilegReportingType</i>	-
14	1	<i>LegCfICode</i>	-
	2	<i>LegMaturityDate</i>	-
	4	<i>LegStrikePrice</i>	-
	8	<i>RoomId</i>	
	16	<i>SecondaryExecId</i>	-
	32	<i>UserRequestID</i>	
	64	<i>SISUsername</i>	
	128	<i>UserStatus</i>	
15	1	<i>TradeReportingIndicator</i>	
	2	<i>EquityPartyID</i>	-
	4	<i>EquityNBBOProtect</i>	
	8	<i>MassCancelId</i>	-
	16	<i>TradePublishInd</i>	
	32	<i>ReportTime</i>	
	64	<i>LegSymbolSfx</i>	
	128	<i>ClientIDAttr</i>	-
16	1	<i>FrequentTraderID</i>	-
	2	<i>SessionEligibility</i>	-
	4	<i>ComboOrder</i>	-
	8	<i>Compression</i>	-
	16	<i>FloorDestination</i>	-
	32	<i>FloorRoutingInst</i>	-
	64	<i>MultiClassSpred</i>	-
	128	<i>OrderOrigin</i>	-
17	1	<i>PriceType</i>	-
	2	<i>StrategyID</i>	-
	4	<i>TradingSessionId</i>	
	8	<i>TradeThroughAlertType</i>	-
	16	<i>SenderLocationID</i>	-
	32	<i>FloorTraderAcronym</i>	-
	64	<i>ExecLegCfICode</i>	-
	128	<i>CustOrderHandlingInst</i>	
18	1	(Reserved)	
	2	<i>CrossInitiator</i>	-
	4	<i>Subreason</i>	-
	8	<i>CrossTradeFlag</i>	
	16	(Reserved)	
	32	<i>Held</i>	-
	64	<i>LocateBroker</i>	
	128	(Reserved)	

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## 6.15 Complex Instrument Accepted (C1, C2 and EDGX Only)

Byte	Bit	Field	
1	1	Side	-
	2	PegDifference	
	4	Price	-
	8	ExecInst	-
	16	OrdType	-
	32	TimeInForce	-
	64	MinQty	-
	128	(Reserved)	
	1	Symbol	-
	2	SymbolSfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	-
	128	ContraTrader	-
	1	Account	-
	2	ClearingFirm	-
3	4	ClearingAccount	-
	8	DisplayIndicator	-
	16	MaxFloor	-
	32	DiscretionAmount	
	64	OrderQty	-
	128	PreventMatch	-
	1	MaturityDate	-
	2	StrikePrice	-
4	4	PutOrCall	-
	8	OpenClose	-
	16	ClOrdIDBatch	
	32	CorrectedSize	-
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	-
	2	LeavesQty	-
5	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
	1	SecondaryOrderID	-
	2	CCP	
6	4	ContraCapacity	-
	8	AttributedQuote	-
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	-
8	4	StopPx	-
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	-
	2	TargetPartyID	-
9	4	AuctionId	-
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	-
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	-
	2	AllocQty	-
10	4	GiveUpFirmID	-
	8	RoutingFirmID	-
	16	WaiverType	
	32	CrossExclusionIndicator	-
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorId	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	•
	2	LegMaturityDate	•
14	4	LegStrikePrice	•
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	-
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	-
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	-
	2	StrategyID	-
17	4	TradingSessionID	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 6.16 Complex Instrument Rejected (C1, C2, and EDGX Only)

Byte	Bit	Field	
1	1	Side	-
	2	PegDifference	
	4	Price	-
	8	ExecInst	-
	16	OrdType	-
	32	TimeInForce	-
	64	MinQty	-
	128	(Reserved)	
	1	Symbol	-
	2	Symbolsfx	
2	4	Currency	
	8	IdSource	
	16	SecurityId	
	32	SecurityExchange	
	64	Capacity	-
	128	ContraTrader	-
	1	Account	-
	2	ClearingFirm	-
3	4	ClearingAccount	-
	8	DisplayIndicator	-
	16	MaxFloor	-
	32	DiscretionAmount	
	64	OrderQty	-
	128	PreventMatch	-
	1	MaturityDate	-
	2	StrikePrice	-
4	4	PutOrCall	-
	8	OpenClose	-
	16	ClOrdIDBatch	
	32	CorrectedSize	-
	64	PartyID	
	128	AccessFee	
	1	OrigClOrdID	-
	2	LeavesQty	-
5	4	LastShares	-
	8	LastPx	-
	16	DisplayPrice	-
	32	WorkingPrice	-
	64	BaseLiquidityIndicator	-
	128	ExpireTime	-
	1	SecondaryOrderID	-
	2	CCP	
6	4	ContraCapacity	-
	8	AttributedQuote	-
	16	ExtExecInst	
	32	BulkOrderIds	
	64	BulkRejectReasons	
	128	PartyRole	

Byte	Bit	Field	
7	1	SubLiquidityIndicator	-
	2	TradeReportTypeReturn	
	4	TradePublishIndReturn	
	8	Text	
	16	Bid	
	32	Offer	
	64	LargeSize	
	128	LastMkt	
	1	FeeCode	-
	2	EchoText	-
8	4	StopPx	-
	8	RoutingInst	-
	16	RoutStrategy	-
	32	RouteDeliveryMethod	-
	64	ExDestination	-
	128	TradeReportRefID	
	1	MarketingFeeCode	-
	2	TargetPartyID	-
9	4	AuctionId	-
	8	OrderCategory	
	16	LiquidityProvision	
	32	CmtaNumber	-
	64	CrossType	-
	128	CrossPrioritization	-
	1	CrossId	-
	2	AllocQty	-
10	4	GiveUpFirmID	-
	8	RoutingFirmID	-
	16	WaiverType	
	32	CrossExclusionIndicator	-
	64	PriceFormation	
	128	ClientQualifiedRole	
	1	ClientID	
	2	InvestorID	
11	4	ExecutorID	
	8	OrderOrigination	
	16	Algo	
	32	DeferralReason	
	64	InvestorQualifiedRole	
	128	ExecutorQualifiedRole	
	1	CtiCode	
	2	ManualOrderIndicator	
12	4	OperatorId	
	8	TradeDate	-
	16	ClearingPrice	
	32	ClearingSize	
	64	ClearingSymbol	
	128	ClearingOptionalData	-

Byte	Bit	Field	
13	1	CumQty	-
	2	DayOrderQty	-
	4	DayCumQty	-
	8	AvgPx	-
	16	DayAvgPx	-
	32	PendingStatus	
	64	DrillThruProtection	-
	128	MultilegReportingType	-
	1	LegCFICode	-
	2	LegMaturityDate	-
14	4	LegStrikePrice	-
	8	RoomId	
	16	SecondaryExecId	-
	32	UserRequestID	
	64	SISUsername	
	128	UserStatus	
	1	TradeReportingIndicator	
	2	EquityPartyID	-
15	4	EquityNBBOProtect	
	8	MassCancelId	-
	16	TradePublishInd	
	32	ReportTime	
	64	LegSymbolSfx	
	128	ClientIDAttr	-
	1	FrequentTraderID	-
	2	SessionEligibility	-
16	4	ComboOrder	-
	8	Compression	-
	16	FloorDestination	-
	32	FloorRoutingInst	-
	64	MultiClassSprd	-
	128	OrderOrigin	-
	1	PriceType	-
	2	StrategyID	-
17	4	TradingSessionID	
	8	TradeThroughAlertType	-
	16	SenderLocationID	-
	32	FloorTraderAcronym	-
	64	ExecLegCFICode	-
	128	CustOrderHandlingInst	
	1	(Reserved)	
	2	CrossInitiator	-
18	4	Subreason	-
	8	CrossTradeFlag	
	16	(Reserved)	
	32	Held	-
	64	LocateBroker	
	128	(Reserved)	

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## 7 List of Optional Fields

The following are descriptions of optional fields which may be sent or received.

Field	Length	Data Type	Description
<i>Account</i>	16	Text	<p>Corresponds to <i>Account</i> (1) in Cboe FIX.</p> <p>Reflected back on execution reports associated with this order and also passed through to the OCC in the Optional Data field (16 characters) and Customer ID field (max 10 characters). May be made available in the Member's clearing file. A maximum of 10 characters will be passed through to the OCC Customer ID Field but up to 16 characters will be maintained internally. Characters in ASCII range 33-126 are allowed.</p> <p><i>Account</i> (1) will only be mapped to the OCC via the Customer ID field (max 10 characters) and the new <i>ClearingOptionalData</i> (9324) field will be mapped to the OCC via the Optional Data field (16 characters).</p>
<i>AllocQty</i>  (C1 and EDGX only)	4	Binary	<p>Corresponds to <i>AllocQty</i> (80) in Cboe FIX.</p> <p>Number of contracts for this party.</p>
<i>AttributedQuote</i>	1	Alphanumeric	<p>Optional. Allows for an order to be attributed to a firm's Executing Broker ID in Cboe market data feeds. The order may also be included with attributed summary information displays related to quote/trade information on the Cboe website. Must opt-in to support through the Cboe Trade Desk.</p> <p>On a New Order Cross and New Order Cross Multileg message, this field is only applicable to the Agency order.</p> <p>N = Do not attribute firm Executing Broker ID to this order (Default) Y = Attribute firm Executing Broker ID to this order C = Attribute <i>ClientID</i> only. Z = Attribute both <i>ClearingFirm</i> (EFID) and <i>ClientID</i>.</p>
<i>AuctionId</i>  (C1, C2, and EDGX only)	8	Binary	<p>Corresponds to <i>AuctionId</i> (9370) in Cboe FIX.</p> <p>Auction order identifier supplied by Cboe. This identifier corresponds to the identifiers used in Cboe market data products.</p>
<i>AutoMatch</i>  (C1 and EDGX only)	1	Alphanumeric	<p>Corresponds to <i>AutoMatch</i> (9040) in Cboe FIX.</p> <p>Better-priced responses will be matched by the Contra side. Indicates the type of Auto Match the Contra Order will use. Mutually exclusive with <i>LastPriority</i>. Limit type Auto Match orders require <i>AutoMatchPrice</i> to be supplied.</p> <p>0 = Disabled (Default) 1 = Market 2 = Limit</p>

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Field	Length	Data Type	Description
<i>AutoMatchPrice</i> <b>(C1 and EDGX only)</b>	8	Binary Price	<p>Corresponds to <i>AutoMatchPrice</i> (9044) in Cboe FIX.  Sets the limit price at which the Contra Order will Auto Match.  Required if <i>AutoMatch</i> = 2 (Limit), ignored otherwise. Format is the same as <i>Price</i>.</p> <p><b><i>AutoMatchPrice</i> is from the perspective of the Contra Side.</b></p> <p>Net Auction Price of the Strategy.</p> <p><b>Buy Orders:</b>  Positive Value, Debit  Negative Value, Credit  Even Order - 0 (Zero)</p> <p><b>Sell Orders:</b>  Positive Value, Credit  Negative Value, Debit  Even Order - 0 (Zero)</p>
<i>AvgPx</i>	8	Binary Price	<p>Corresponds to <i>AvgPx</i> (6) in Cboe FIX.  Average price of executions for this order weighted by trade size. Zero if <i>CumQty</i> field is zero or if <i>MultilegReportingType</i> = 2.</p>
<i>BaseLiquidityIndicator</i>	1	Alphanumeric	<p>Indicates whether the trade added or removed liquidity.</p> <p>A = Added Liquidity  R = Removed Liquidity  X = Routed to Another Market  C = Auction/Uncrossing</p>
<i>CancelOrigOnReject</i>	1	Alpha	<p>Corresponds to <i>CancelOrigOnReject</i> (9619) in Cboe FIX.  Indicates handling of original order on failure to modify.</p> <p>N = Leave original order alone  Y = Cancel original order if modification fails</p>
<i>Capacity</i>	1	Alpha	<p>Corresponds to <i>OrderCapacity</i> (47) in Cboe FIX.  The capacity of the order.</p> <p>C = Customer  M = Market Maker (this must be used for all Quote Update messages)  F = Firm  U = Professional Customer  N = Away Market Maker  B = Broker-Dealer  J = Joint Back Office  L = Non-Trading Permit Holder Affiliate <b>(C1 and C2 only)</b></p>
<i>ClearingAccount</i>	4	Text	<p>Corresponds to <i>OnBehalfOfSubID</i> (116) and <i>ClearingAccount</i> (440) in Cboe FIX.</p> <p>Supplemental identifier. Recorded and made available in execution reports. Available via Drop feeds.</p>

Field	Length	Data Type	Description
			<p>When <i>Capacity</i> is set to 'M' or 'N' for Market Maker, this field should be filled with the desired market maker ID.</p> <p>When <i>Capacity</i> is set to 'M' for Market-Maker, any unregistered Market-Maker accounts in this field will cause an order to be rejected with a reason code of 'A' and sub-reason code 'L' and a quote to be rejected with a reason code of 'C'.</p> <p>When using CMTA, this value is the Market Maker ID for the CMTA member instead of the Cboe member executing the trade. This field will be sent to the OCC.</p> <p>If <i>Capacity</i> is set to something besides Market Maker, this field can be blank or filled out with an optional string that is passed through to the OCC.</p>
<i>ClearingFirm</i>	4	Alpha	<p>Corresponds to <i>OnBehalfOfCompID</i> (115) Cboe FIX.</p> <p>EFID that will clear the trade. <b>Port attribute value of 'Default EFID' is used if not provided.</b></p>
<i>ClearingOptionalData</i>	16	Text	<p>Corresponds to <i>ClearingOptionalData</i> (9324) in Cboe FIX.</p> <p>This field will be reflected back on execution reports , FIX DROP ports and it will be passed through to the OCC in the Optional Data field.</p>
<i>ClientIDAttr</i>	4	Text	<p>Corresponds to <i>ClientID</i> (109) Cboe FIX.</p> <p>User defined identifier for quote attribution.</p>
<i>CMTANumber</i>	4	Binary	<p>Corresponds to <i>ClearingFirm</i> (439) in Cboe FIX.</p> <p>CMTA Number of the firm that will clear the trade. Must be specified for CMTA orders and left unspecified for non-CMTA orders.</p>
<i>ComboOrder</i> <span style="background-color: cyan;">(C1 only)</span>	1	Alpha	<p>Corresponds to <i>ComboOrder</i> (22005) in Cboe FIX.</p> <p>Declare the order as a Combo (for regulatory relief if trading SPX on the floor).</p> <p>N = (Default) No Y = Yes</p>
<i>Compression</i> <span style="background-color: cyan;">(C1 only)</span>	1	Alpha	<p>Corresponds to <i>Compression</i> (22006) in Cboe FIX.</p> <p>Order is a compression trade.</p> <p>N = (Default) No Y = Yes</p> <p>When <i>CrossType</i> (549) = '4' this field should not be specified.</p>
<i>ContraCapacity</i>	1	Alphanumeric	<p>Capacity of the contra for this execution. See <i>Capacity</i> for allowed values.</p>
<i>ContraTrader</i>	4	Alphanumeric	<p>Corresponds to <i>ContraTrader</i> (337) in Cboe FIX.</p> <p>Only present on local book trades, not present on routed trades.</p> <p><b>Simple Instrument Fills</b></p> <p>Displays the EFID (Contra <i>ClearingFirm</i>) of the contra side firm. This includes leg fill reports (<i>MultilegReportingType</i>=2) that are sent as a result of a complex trade.</p>

Field	Length	Data Type	Description
			<p>For Cboe Options floor trades, displays the Contra Floor Acronym <b>(C1 only)</b>.</p> <p><b>Complex Package Fills</b></p> <p><i>ContraTrader</i> will be sent and populated on electronic, complex package fills (<i>MultilegReportingType</i>=3) when the contra side is also a complex order. When legging in to the simple books <i>ContraTrader</i> will be blank.</p> <p><i>ContraTrader</i> will also be blank on complex package fills executed on the Cboe Options trading floor <b>(C1 only)</b>.</p>
<i>CorrectedSize</i>	4	Binary	<p>Corresponds to <i>CorrectedSize</i> (6655) in Cboe FIX.</p> <p>Number of shares after trade adjustment.</p>
<i>CrossExclusion Indicator</i> <b>(C1 and EDGX only)</b>	1	Alpha	<p>Corresponds to <i>CrossExclusionIndicator</i> (6438) in Cboe FIX.</p> <p>N = Contracts were executed in auction against Contra party or against a resting order when auction was initiated</p> <p>Y = Contracts were executed in auction against another party.</p>
<i>CrossID</i> <b>(C1 and EDGX only)</b>	20	Text	<p>Corresponds to <i>CrossID</i> (548) in Cboe FIX.</p> <p>Day-unique identifier for the cross order chosen by the client. Characters in the ASCII range 33-126 are allowed, except for comma, semicolon, pipe, the 'at' symbol and double quotes.</p>
<i>CrossInitiator</i> <b>(C1 and EDGX only)</b>	4	Alpha	<p>Corresponds to <i>CrossInitiator</i> (22026) in Cboe FIX.</p> <p>MPID field required on orders routed to destinations via NYSE Chicago using <i>EquityExDestination</i> (22016). Should be populated with the originator or routing broker MPID. May or may not be the same as the agency/contra MPID.</p> <p>Note that Broker Choice will be allowed on any stock/option order including orders of any ratio.</p>
<i>CrossOnBehalfOfID</i> <b>(C1 and EDGX only)</b>	4	Alpha	<p>Optional identifier of the initiating customer on orders routed to destinations via NYSE Chicago using <i>EquityExDestination</i> (22016). Populate with the order initiator's MPID or any other identifier of choice.</p> <p>Should be populated if not the same broker specified in <i>CrossInitiator</i> (22026).</p> <p>Note that Broker Choice is allowed on any stock/option order including FLEX or Non-FLEX orders of any ratio.</p>
<i>CrossType</i>	1	Alphanumeric	<p>Corresponds to <i>CrossType</i> (549) in Cboe FIX.</p> <p>Type of auction order being submitted. This indicates the type of auction that will be initiated upon order entry.</p> <p>1 = Automated Improvement Mechanism (AIM) 2 = Qualified Contingent Cross (QCC) 3 = Solicitation Cross (SAM) <b>(C1 and EDGX only)</b> 4 = Position Compression Cross (PCC) <b>(C1 Only)</b></p>
<i>CrossPrioritization</i> <b>(C1 and EDGX only)</b>	1	Alphanumeric	<p>Corresponds to <i>CrossPrioritization</i> (550) in Cboe FIX.</p> <p>Indicates which side of the cross order will be prioritized for execution. This identifies the Agency side.</p> <p>1 = Buy 2 = Sell</p>
<i>CumQty</i>	4	Binary	Corresponds to <i>CumQty</i> (14) in Cboe FIX

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			Cumulative quantity of contracts executed for the order over the life of the order, which may be multiple business days in the case of persisting GTC/GTD orders. Please refer the Complex Book Process Specification for special C1 Floor Specific Handling.
<i>CustomGroupID</i>	2	Binary	Corresponds to <i>CustomGroupID</i> (7699) in Cboe FIX for New Order and Purge Orders messages. Used to group orders for use in Purge Orders messages where multiple orders can be cancelled by specifying a list of <i>CustomGroupIDs</i> .
<i>DayAvgPx</i>	8	Binary Price	Corresponds to <i>DayAvgPx</i> (426) in Cboe FIX. Applicable to persisting GTC/GTD orders only. Average price per contract of executions on current business date. Zero if <i>DayCumQty</i> is zero.
<i>DayCumQty</i>	4	Binary	Corresponds to <i>DayCumQty</i> (425) in Cboe FIX. Applicable to persisting GTC/GTD orders only. Cumulative quantity of contracts executed for the order during the current business day.
<i>DayOrderQty</i>	4	Binary	Corresponds to <i>DayOrderQty</i> (424) in Cboe FIX. Applicable to persisting GTC/GTD orders only. Contracts remaining to be filled for the order at the beginning of the current business day (i.e., <i>OrderQty</i> – <i>CumQty</i> at the end of the previous business day).
<i>DisplayIndicator</i>	1	Alphanumeric	Corresponds to <i>DisplayIndicator</i> (9479) in Cboe FIX. V = Default. As determined by port level setting (default to S) S = Display Price Sliding (this is to override a opt-out of Display Price Sliding at the port level (BZX only)) L = Display Price Sliding, but reject if order crosses NBBO on entry (BZX only) M = Multiple Display Price Sliding (BZX only) P = Price Adjust m = Multiple Price Adjust R = Reject the order if it cannot be booked and displayed without adjustment. N = NoRescrapeAtLimit (BZX only) See 'Display Indicator Features' for more details on sliding options.
<i>DisplayPrice</i>	8	Binary Price	Only present when order is fully or partially booked. If the order has to be displayed at a less aggressive price for some reason, then that price will be reported here, otherwise equals <i>Price</i> .
<i>DisplayRange</i>	4	Binary	Corresponds to <i>DisplayRange</i> (8020) in Cboe FIX. Used for random replenishment of reserve orders. Random replenishment establishes a range of possible values for the order quantity that is to be displayed. For example, if MaxFloor = 2,000, and <i>DisplayRange</i> = 200, the displayed quantity will be

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			selected from one of the following values: 1,800, 1,900, 2,000, 2,100, or 2,200. Must be specified in round lots.
<i>DrillThruProtection</i>  (C1, C2, and EDGX only)	8	Binary Price	Corresponds to <i>DrillThruProtection</i> (6253) in Cboe FIX.  Amount sender is willing to trade through the SNBBO. A zero price provides full SNBBO protection. The price should be entered as a non-negative value.  Exchange default values are 5% of the opposite of the SNBBO, with a minimum value of \$0.02, a maximum value of \$2.00 for SPX/SPXW, and a maximum value of \$0.25 for non-SPX/SPXW.  Values provided on a New Complex Order message do not have a minimum or maximum.
<i>EchoText</i>	64	Text	Corresponds to <i>Text</i> (58) in Cboe FIX.  Free format text string. May be echoed back on Cboe to Member messages.
<i>EquityBuyClearingFirm</i>  (C1 and EDGX only)	4	Text	Corresponds to <i>EquityBuyClearingFirm</i> (22014) in Cboe FIX.  Clearing firm on buy side of the equity trade associated with a QCC trade.  Valid when <i>CrossType</i> = '2'.
<i>EquityExDestination</i>  (C1 and EDGX only)	1	Alphanumeric	Corresponds to <i>EquityExDestination</i> (22016) in Cboe FIX.  Valid when an equity symbol is present in the complex instrument.  Exchange venue to which equity leg matching will be submitted. Supported values are:  C = Cowen (default) P = Penserra via NYSE Chicago F = FOG Equities via NYSE Chicago L = Libucki & Co. via NYSE Chicago S = SRT Securities via NYSE Chicago  If buyer and seller do not provide matching venues, then the equity match will be reported to Cowen ('C').
<i>EquityLegShortSell</i>  (C1 and EDGX only)	1	Alphanumeric	Corresponds to <i>EquityLegShortSell</i> (22624) in Cboe FIX.  5 = Sell Short (for stock leg) 6 = Sell Short Exempt (for stock leg)
<i>EquityPartyId</i>  (C1 and EDGX only)	4	Alpha	Corresponds to <i>EquityPartyId</i> (22008) in Cboe FIX.  MPID used to clear the equity leg being cleared via the Exchange.
<i>EquitySellClearingFirm</i>  (C1 and EDGX only)	4	Text	Corresponds to <i>EquitySellClearingFirm</i> (22015) in Cboe FIX.  Clearing firm on sell side of the equity trade associated with a QCC trade.  Valid when <i>CrossType</i> = '2'.
<i>EquityTradePrice</i>  (C1 and EDGX only)	8	Binary Price	Corresponds to <i>EquityTradePrice</i> (22011) in Cboe FIX.  Price at which the equity associated with a QCC trade.  Valid when <i>CrossType</i> = '2'.

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Field	Length	Data Type	Description
<i>EquityTradeSize</i>  <span style="background-color: cyan;">(C1 and EDGX only)</span>	4	Binary	Corresponds to <i>EquityTradeSize</i> (22012) in Cboe FIX. Number of shares executed in the equity associated with a QCC trade. Valid when <i>CrossType</i> = '2'.
<i>EquityTradeVenue</i>  <span style="background-color: cyan;">(C1 and EDGX only)</span>	1	Text	Corresponds to <i>EquityTradeVenue</i> (22013) in Cboe FIX. Exchange venue where equity associated with a QCC traded. Valid when <i>CrossType</i> (549) = '2'.  A = NYSE American B = Nasdaq BX C = NYSE National I = Investors Exchange J = Cboe EDGA Exchange K = Cboe EDGX Exchange M = CHX N = NYSE P = NYSE Arca Q = Nasdaq X = Nasdaq PSX Y = Cboe BYX Exchange Z = Cboe BZX Exchange

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Field	Length	Data Type	Description
<i>EquityTransactTime</i> <b>(C1 and EDGX only)</b>	8	DateTime	Corresponds to <i>EquityTransactTime</i> (22060) in Cboe FIX. Time of equity trade associated with a QCC trade. Valid when <i>CrossType</i> = '2'.
<i>ExDestination</i>	1	Text	Corresponds to <i>ExDestination</i> (100) in Cboe FIX. Used to specify the designated away venue for <i>RoutStrategy</i> = DIRC.  A = NYSE ARCA E = NASDAQ ISE F = MIAX P = MIAX PEARL D = MIAX Emerald G = EDGX Options H = C2 K = BOX M = MEMX N = NASDAQ S = NASDAQ BX U = NYSE AMERICAN W = Cboe Options (C1) X = Nasdaq PHLX Z = BZX Options g = Nasdaq GEMX m = Nasdaq MRX w = MIAX Sapphire
<i>ExecInst</i>	1	Text	Corresponds to <i>ExecInst</i> (18) in Cboe FIX.  1 = Not held. Must be routed to the floor. <b>(C1 only)</b> f = Intermarket Sweep (Directed or Cboe) r = Settlement Liquidity <sup>1</sup> <b>(C1 only)</b> G = All or None (AON) <b>(C1 and EDGX only)</b> s = Sweep <sup>2</sup> <b>(C1 and EDGX only)</b> ASCII NULL (0x00) = no special handling  <sup>1</sup> Requires <i>TimeInForce</i> = 2 and <i>Price</i> . <sup>2</sup> Used for New Order Cross and New Order Cross Multileg messages only. Requires <i>CrossType</i> = 1 (AIM).
<i>ExecLegCFICode</i>	6	Alphanumeric	Corresponds to <i>LegCFICode</i> (608) in Cboe FIX.  CFI Code for leg on execution.  OP = Options Put OC = Options Call E = Equity
<i>ExpireTime</i>	8	DateTime	Corresponds to <i>ExpireTime</i> (126) in Cboe FIX. Required for <i>TimeInForce</i> = 6 orders, specifies the date-time (in UTC) that the order expires.

Field	Length	Data Type	Description
<i>FeeCode</i>	2	Alphanumeric	Corresponds to <i>FeeCode</i> (9882) in Cboe FIX.  Indicates fee associated with an execution. Fee codes are published in the pricing schedule. New fee codes may be sent with little or no notice. Members are encouraged to code their systems to accept unknown fee codes.
<i>FloorDestination</i> (C1 only)	4	Text	Corresponds to <i>FloorDestination</i> (22100) in Cboe FIX.  Specifies a default PAR workstation (ex. W001) to route to on the floor (or 'PARO' to route to the Floor PAR Official of the underlying symbol) if not specified on inbound messages.
<i>FloorRoutingInst</i> (C1 only)	1	Alphanumeric	Corresponds to <i>FloorRoutingInst</i> (22303) in Cboe FIX.  D = Direct (do not attempt to process electronically) <sup>1</sup> E = Electronic only X = Route to floor if unable to process electronically <sup>1</sup> <blank> = Port level default  The default value for any given port can be changed by requesting an update to the "Default FloorRoutingInst" port attribute.  <sup>1</sup> When <i>FloorRoutingInst</i> is 'D' or 'X', <i>RoutingInst</i> must be set to 'B' or 'R' for simple orders; or 'B' for complex instruments.
<i>FrequentTraderID</i> (C1 only)	6	Text	Corresponds to <i>FrequentTraderId</i> (21097) in CFE FIX.  Identifies the frequent trader program in which the order is participating.
<i>GiveUpFirmID</i> (C1 and EDGX only)	4	Alpha	Corresponds to <i>GiveupFirmID</i> (9946) in Cboe FIX.  For the Agency Side, this field must equal the value of <i>ClearingFirm</i> (EFID). Each Contra allocation will use this field instead of <i>ClearingFirm</i> for clearing information.
<i>Held</i> (C1 only)	1	Alpha	Corresponds to <i>Held</i> (20012) in Cboe FIX.  Indicates if order should be designated as 'Held' upon order entry.  N = Mark order as Not Held Y = Mark order as Held  Default value is 'N' if the order is direct routed to a Non-PAR Official on the floor.
<i>LastPriority</i> (C1 and EDGX only)	1	Alphanumeric	Corresponds to <i>LastPriority</i> (9849) in Cboe FIX.  When enabled, allocation will go to other participants' responses before requiring the Contra Order to satisfy remaining contracts of the Agency Order. Mutually exclusive with <i>AutoMatch</i> .  0 = Disabled (Default) 1 = Enabled
<i>LastPx</i>	8	Binary Price	Corresponds to <i>LastPx</i> (31) in Cboe FIX.  Price of this fill.
<i>LastShares</i>	4	Binary	Corresponds to <i>LastShares</i> (32) in Cboe FIX.  Executed share quantity.

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<i>LeavesQty</i>	4	Binary	Corresponds to <i>LeavesQty</i> (151) in Cboe FIX. Quantity still open for further execution. If zero, the order is complete.
<i>LegCFICode</i>  (C1, C2, and EDGX only)	6	Alphanumeric	Corresponds to <i>LegCFICode</i> (608) in Cboe FIX. CFI Code for leg. OP = Options Put OC = Options Call E = Equity (C1 and EDGX only)
<i>LegMaturityDate</i>  (C1, C2, and EDGX only)	4	Date	Corresponds to <i>LegMaturityDate</i> (611) in Cboe FIX. Required if <i>LegSymbol</i> is in OSI format.
<i>LegPositionEffectsExt</i>	16	Alpha	Indicates status of the client position in the option for each complex option leg. This value String of characters 'O', 'C', and 'N', is equal in length to the number of option legs of the instrument. If an equity leg is present it will always be the last leg, and the position effect must be set to 'N'.  O = Open C = Close N = None*  *Orders with <i>Capacity</i> = 'M' or 'N' will not be required to specify a position effect on their orders or may specify a value of 'N'. A <blank> will be sent to OCC.  If the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B'.  If this field is present it will be used instead of the <i>LegPositionEffects</i> field in the New Cross Order Multileg message. This field is intended to be used with complex instruments containing greater than 12 legs, however it can be used with a complex instrument with 12 or fewer legs.
<i>LegStrikePrice</i>  (C1, C2, and EDGX only)	8	Binary Price	Corresponds to <i>LegStrikePrice</i> (612) in Cboe FIX. Option strike price. System maximum is 999,999.99. Must be non-negative. Required if <i>LegSymbol</i> is in OSI format.
<i>MarketingFeeCode</i>  (C1 and EDGX only)	2	Alphanumeric	Corresponds to <i>MarketingFeeCode</i> (5937) in Cboe FIX.  P = Penny Pilot N = Non-Penny Pilot X = Not Eligible for Marketing Fees
<i>MassCancelID</i>	20	Text	Corresponds to <i>MassCancelID</i> (7695) in Cboe FIX. If the populated value ends in a space the message will be rejected. Mass cancel requests containing a currently outstanding <i>MassCancelID</i> will be rejected.  This field will be echoed back in the resulting response message when the single acknowledgement style is selected.
<i>MassCancelInst</i>	16	Text	Corresponds to <i>MassCancelInst</i> (7700) in Cboe FIX. Used for specification of Purge Orders message functionality and

Field	Length	Data Type	Description
			<p>optionally used for specification of Mass Cancel functionality associated with the Cancel Order message.</p> <p>At least one character must be provided (Clearing Firm Filter). Contiguous characters must be specified up to total length. Truncated/unspecified characters will default to values indicated (D) below.</p> <p>EFID values specified in <i>OnBehalfOfCompld</i> that are not allowed to clear for the firm will be rejected.</p> <p><b>1<sup>st</sup> Character: Clearing Firm Filter</b></p> <p>A = No filtering by clearing firm relationship is performed.</p> <p>F = All orders that were sent under the clearing relationship specified in <i>ClearingFirm</i> optional field. If 'F' specified and the <i>ClearingFirm</i> field is not provided, the Mass Cancel or Purge Orders message will be rejected. If 'F' specified and the <i>ClearingFirm</i> field is provided but is blank (NULL), the Mass Cancel or Purge Orders message will be treated like 'A', and no filtering by clearing firm relationship is performed.</p> <p><b>2<sup>nd</sup> Character: Acknowledgement Style</b></p> <p>M = (D) Order Cancelled messages are sent for each cancelled order. If 'M' is set and the <i>MassCancelID</i> optional field is specified but the value is not blank (NULL), then the Mass Cancel message will be rejected. For a Purge Orders message 'M' will be accepted with a non-blank <i>MassCancelID</i> value.</p> <p>S = A single Mass Cancel Acknowledgement message is sent once all cancels have been processed. The <i>MassCancelID</i> optional field must be specified or the Mass Cancel or Purge Orders message will be rejected.</p> <p>B = Both individual Order Cancelled and Mass Cancel Acknowledgement messages will be sent. Also requires <i>MassCancelID</i> optional field to be specified or the Mass Cancel or Purge Orders message will be rejected.</p> <p>A = A single Mass Cancel Acknowledgement message is sent to the purge port and one Purge Notification message for each matching unit with cancelled orders is sent to the order entry ports that originated those orders. The message type must be Purge Orders message; Mass Cancel messages specifying this style will be rejected. The <i>CancelledOrderCount</i> field of the purge port message will contain a count of all cancelled orders. The same field of the order entry port messages will contain a count of all cancelled orders from the specified matching unit that originate from the port. The <i>MassCancelID</i> optional field must be specified or the Purge Orders will be rejected.</p> <p>I = A single Mass Cancel Acknowledgement message is sent for each matching unit impacted in a multi-unit cancel. The message type must be Purge Orders; Mass Cancel messages specifying this style will be rejected. A final acknowledgement is sent when the last matching unit has completed all requested cancellations.</p>

Field	Length	Data Type	Description
			<p><i>MassCancelId</i> (7695) must be specified, or the Purge Order will be rejected.</p> <p><b>3<sup>rd</sup> Character: Lockout Instruction</b>      N = (D) No lockout      L = Lockout until corresponding a risk reset is received.      Lockout can be used only with Clearing Firm Filter set to 'F', otherwise the Mass Cancel or Purge Orders message will be rejected. Lockout will apply to all new orders for the <i>ClearingFirm</i> (and <i>ProductName</i> or <i>CustomGroupIDs</i>, if specified), regardless of other filtering in the Purge Orders or Cancel Order message.</p> <p><b>4<sup>th</sup> Character: Instrument Type Filter (C1, C2, and EDGX Only)  <i>Value will be ignored on BZX Options.</i></b>      B = (D) Cancel both single leg and complex orders      S = Cancel single leg orders only      C = Cancel complex orders only</p> <p><b>5<sup>th</sup> Character: GTC Order Filter</b>      C = (D) Cancel GTC and GTD orders      P = Don't cancel (preserve) GTC and GTD orders</p> <p>If the <i>RiskRoot</i> optional field is specified, it must contain a valid symbol (e.g., 'MSFT'), in which case only orders associated with the specified <i>RiskRoot</i> will be cancelled.</p> <p>A self-imposed lockout can be released using the <i>RiskReset</i> field of the New Order or New Complex Order message or by sending a Reset Risk message. If <i>RiskRoot</i> optional field is specified, a symbol level reset is required, otherwise a EFID level reset is required to release a lockout. For more information, refer to the Cboe Risk Management Specification.</p> <p>If a risk limit is tripped or manually locked out at the end of the RTH session, the trip/lockout will persist into the Curb session (C1 only).</p>
<i>MatchingUnit</i>	1	Binary	<p>Corresponds to <i>MatchingUnit</i> (25017) in Cboe FIX.</p> <p>Matching unit number the Purge Orders message will be sent toward. If blank or 0, the Purge Orders message will be sent to all units. Incompatible with symbol-level purges, specifying both symbol and <i>MatchingUnit</i> will cause the Purge Orders message to be rejected.</p> <p>If both <i>MassCancelInst</i> lockout instruction = 'L' and <i>MatchingUnit</i> are specified, a lockout will occur and will impact only the specified matching unit. Subsequent risk resets will clear risk locks on all units.</p>
<i>MaturityDate</i>	4	Date	Corresponds to <i>MaturityMonth</i> (200) and <i>MaturityDay</i> (205) in Cboe FIX.
<i>MaxFloor</i>	4	Binary	<p>Corresponds to <i>MaxFloor</i> (111) in Cboe FIX.</p> <p>Portion of <i>OrderQty</i> to display. The balance is reserve. Zero displays the entire quantity. The displayed quantity of each order at a price level is decremented first. When displayed</p>

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Field	Length	Data Type	Description
			<p>quantity is fully decremented, it is reloaded up to <i>MaxFloor</i> from reserve.</p> <p>Default = 0</p> <p>An order with a <i>MaxFloor</i> greater than 0 will be rejected for Cboe proprietary classes (such as DJX, RUT, SPX, XSP, and VIX).</p>
<i>MinQty</i>	4	Binary	<p>Corresponds to <i>MinQty</i> (110) in Cboe FIX.</p> <p>Minimum fill quantity for IOC orders which only interact with liquidity on the target book. Ignored for other orders.</p>
<i>MultiClassSprd</i>  (C1 only)	1	Alpha	<p>Indicates an option is part of a multi-class spread.</p> <p>N = (Default) No Y = Yes</p>
<i>MultilegReportingType</i>  (C1, EDGX and C2 only)	1	Alphanumeric	<p>Corresponds to <i>MultilegReportingType</i> (442) in Cboe FIX</p> <p>Indicates the type of Order Execution message.</p> <p>1 = Single-leg instrument 2 = Individual leg of multi-leg instrument 3 = Entire multi-leg instrument package</p>
<i>NoOfSecurities</i>  (C1, C2, and EDGX only)	4	Binary	<p>Corresponds to <i>NoOfSecurities</i> (8641) in Cboe FIX.</p> <p>Indicates the number of securities created by the member in this trading session.</p>
<i>OpenClose</i>	1	Alphanumeric	<p>Corresponds to <i>OpenClose</i> (77) in Cboe FIX.</p> <p>Indicates status of client position in the option.</p> <p>O = Open C = Close N = None*</p> <p>*Orders with <i>Capacity</i> = 'M' or 'N' will not be required to specify <i>OpenClose</i> on their orders. A value of 'N' may optionally be specified unless the series is limited to closing only.</p> <p>If the series is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B', or the order has a <i>RoutingInst</i> = 'P'.</p> <p>An Open position cannot trade with an Open position for series limited to Closing Only transactions, even if the inbound IOC from the aggressing market maker is sent with that combination of tags.</p>
<i>OrderOrigin</i>  (C1 only)	3	Alphanumeric	<p>Corresponds to <i>OrderOrigin</i> (9465) in Cboe FIX.</p> <p>Floor acronym of Market Maker on whose behalf this order is being entered by a floor broker.</p>
<i>OrderQty</i>	4	Binary	<p>Corresponds to <i>OrderQty</i> (38) in Cboe FIX.</p> <p>Order quantity. System limit is 999,999 contracts.</p>

Field	Length	Data Type	Description
<i>OrdType</i>	1	Alphanumeric	<p>Corresponds to <i>OrdType</i> (40) in Cboe FIX.</p> <p>1 = Market 2 = Limit (default) 3 = Stop 4 = Stop Limit</p> <p>Market implies <i>TimeInForce</i> of IOC (3).</p> <p>Stop/Stop Limit orders must be set to <i>TimeInForce</i> = '0' (DAY), '1' (GTC), or '6' (GTD). Note market and stop/stop limit orders are not supported during GTH or Curb sessions.</p>
<i>OrigClOrdID</i>	20	Text	Corresponds to <i>OrigClOrdID</i> (41) in Cboe FIX.
<i>OrigCrossID</i>	20	Text	Corresponds to <i>OrigCrossID</i> (551) in Cboe FIX.
<i>ORS</i>  <span style="background-color: cyan; border: 1px solid black; padding: 2px;">(C1 only)</span>	1	Alpha	<p>Corresponds to <i>ORS</i> (22003) in Cboe FIX.</p> <p>Order router subsidy eligibility (used for billing purposes).</p> <p>N = (Default) No Y = Yes</p>
<i>PreventMatch</i>	3	Alpha	<p>Corresponds to <i>PreventMatch</i> (7928) in Cboe FIX.</p> <p>Three characters:</p> <p><b>1<sup>st</sup> character - MTP Modifier:</b> N = Cancel Newest O = Cancel Oldest B = Cancel Both S = Cancel Smallest D = Decrement larger / Cancel Smaller d = Same as D above, but only decrement LeavesQty. Do not restate OrderQty</p> <p><b>2<sup>nd</sup> character - Unique ID Level:</b> F = Prevent Match at Firm(Member) Level M = Prevent Match at EFID Level</p> <p><b>3<sup>rd</sup> character - Trading Group ID (optional):</b> Member specified alphanumeric value 0-9, A-Z, or a-z.</p> <p>The Unique ID level (character 2) of both orders must match to prevent a trade. If specified <u>on both orders</u>, Trading Group ID (character 3) must match to prevent a trade.</p> <p>The MTP Modifier (character 1) of the inbound order will be honored, except that if the inbound order specifies Decrement and the resting order does not, and the resting order is larger, then both orders will be cancelled. This exception is to protect the order entry software for the resting order from receiving an unexpected restatement message.</p> <p>If order entry software is prepared to handle unexpected restatement messages, this exception may be override at the port level by requesting "Allow MTP Decrement Override" functionality.</p> <p>Uses of MTP Modifier 'D' or 'd' and users of "Allow MTP Decrement Override" functionality must be prepared to receive an <i>Order Restated</i> message that decrements <i>LeavesQty</i> (and, for method 'D', <i>OrdQty</i> as well).</p>

Field	Length	Data Type	Description
			<p>On a New Order Cross message, only 'N' and 'O' are supported for the MTP modifier. MTP instructions on AIM orders will be used to prevent executions against AIM responses only; they will permit executions against resting or unrelated orders. Responses may only employ N (Cancel Newest) in which case the response will be cancelled and the auction order will continue.</p> <p>On a New Order Cross message, this field is only applicable to the Agency order.</p>
<i>Price</i>	8	Binary Price	<p>Corresponds to <i>Price</i> (44) in Cboe FIX.</p> <p>Limit price.</p> <p>Required for limit orders (<i>OrdType</i> = 2). If specified on market orders (<i>OrdType</i> = 1), the order will be rejected.</p> <p>This field is also used to specify an optional cap price for pegged orders.</p> <p>For complex orders, net pricing of the strategy. Four implied decimal places. <b>(EDGX and C2 only)</b></p> <p><i>Buy orders:</i></p> <ul style="list-style-type: none"> <li>• Positive value, Debit</li> <li>• Negative value, Credit</li> <li>• Even order, 0 (Zero)</li> </ul> <p><i>Sell orders:</i></p> <ul style="list-style-type: none"> <li>• Positive value, Credit</li> <li>• Negative value, Debit</li> <li>• Even order, 0 (Zero)</li> </ul>
<i>PriceType</i> <b>(C1 only)</b>	1	Alphanumeric	<p>Corresponds to <i>PriceType</i> (423) in Cboe FIX.</p> <p>0 = Fixed cabinet trade price 2 = (Default) Price per unit (contract) 3 = Fixed amount (cash spread pricing) – only for complex orders routed to the floor</p>
<i>PutOrCall</i>	1	Alphanumeric	<p>Corresponds to <i>PutOrCall</i> (201) in Cboe FIX.</p> <p>0 = Put 1 = Call</p>
<i>RevisedLegs</i> <b>(C1, C2, and EDGX only)</b>	1	Alphanumeric	<p>Indicates if the legs on the created complex strategy have been reordered from the original request.</p> <p>If the legs were reordered, the order of the <i>OpenClose</i> fields on a New Complex Order message must be the order returned by the exchange, not the order from the original request.</p> <p>1 = Legs were not reordered 2 = Legs were reordered</p>
<i>RiskReset</i>	8	Text	<p>Corresponds to <i>RiskReset</i> (7692) in Cboe FIX.</p> <p>For use by customers using Cboe's Risk Management tools to reset or release EFID Group, EFID, Risk Root, or Custom Group ID level lockout conditions resulting from risk profile trips or self-imposed lockouts issued via Cancel Order or Purge Orders messages.</p> <p><b>Single Character Values – with counter reset:</b></p>

Field	Length	Data Type	Description
			<p>S = Risk Root level risk/lockout reset      F = EFID level risk/lockout reset      C = CustomGroupID lockout reset      G = EFID Group level risk/lockout reset</p> <p><b>Single Character Values – without counter reset:</b></p> <p>T = Risk Root-level self-imposed lockout reset      E = EFID self-imposed lockout reset</p> <p>Values may be combined together to allow for resets of multiple risk trips or self-imposed lockouts in a single message. For example, 'GS', 'SC', 'FC', and 'SFC' are all acceptable values.</p> <p>The <b>single character values with no counter reset will release a self-imposed lockout condition only</b> without resetting any counters related to active risk rules. This may be useful for time based risk rules where the lockout may be released without resetting any risk values being tracked back to zero. If a conflicting value is provided the lockout release with counter reset will take precedence. For example, 'ST' will release any lockout and reset any applicable root-level rule counters to zero.</p> <p>When a resting or inbound order is executed and a Risk Root level risk profile limit is reached, resting orders on the associated Risk Root will be cancelled and inbound orders on the Risk Root will be rejected until this field is filled with the value S on a subsequent New Order or New Complex Order message corresponding to a symbol on the same Risk Root. All active Risk Root level rules in the risk profile are reset at this time. Individual rules cannot be reset on their own.</p> <p>If an EFID-level rule is tripped, this tag can be filled with the value 'F' to reset all EFID-level rules. While this will reset EFID-level rules, it is possible that both EFID and Risk Root level rules are currently tripped. Setting this field to 'F' will not clear Risk Root-level rules and the order may still be rejected. To clear both Risk Root and EFID-level rules, set this field to 'SF' to reset all associated Risk Root and EFID-level lockouts.</p> <p>If orders have been locked out at the <i>CustomGroupID</i> level, inbound orders for the locked <i>CustomGroupID</i> will be rejected until this field is filled with a 'C' value on a New Order or New Complex message order that uses the locked <i>CustomGroupID</i>.</p> <p><b>EFID and EFID Group resets are not allowed by default.</b>      Customers should contact the Cboe Trade Desk to reset these limits or request a change to the "EFID Risk Reset" port setting using the Logical Port Request form.</p> <p>If a risk limit is tripped or manually locked out at the end of the RTH session, the trip/lockout will persist into the Curb session (<a href="#">C1 only</a>).</p> <p>For more information, refer to the Cboe US Options Risk Management Specification.</p>
<i>RiskRoot</i>	6	Text	Corresponds to <i>Symbol</i> (55) in Cboe FIX. The underlying symbol.
<i>RouteDeliveryMethod</i>	3	Text	Corresponds to <i>RouteDeliveryMethod</i> (9350) in Cboe FIX. RTI = Route to improve (default if not specified). Ability to receive price improvement will take priority over speed of execution.

Field	Length	Data Type	Description
			<p>RTF = Route to Fill. Speed of execution will take priority over potential price improvement.</p> <p>Only applicable to <i>RoutStrategy</i> = ROUT</p>
<i>RoutingFirmID</i>	4	Alpha	<p>Corresponds to <i>RoutingFirmID</i> (7933) in Cboe FIX.</p> <p>Used to optionally convey the routing firm of the order. If supplied, value must be a valid member EFID.</p> <p>May be combined with <i>MassCancelInst</i> with Firm Filter set to 'F' in a mass cancel request.</p>
<i>RoutingInst</i>	4	Text	<p>Corresponds to <i>RoutingInst</i> (9303) in Cboe FIX.</p> <p><b>1<sup>st</sup> character:</b></p> <p>B = Book Only (not routable, will remove from local book)  P = Post Only (not routable)<sup>1</sup>  R = Routable  S = Super Aggressive – Cross or Lock (order will be removed from the book and routed to any quote that is locking or crossing the order)  X = Aggressive – Cross Only (order will be removed from the book and routed to any quote that is crossing the order)</p> <p><b>2<sup>nd</sup> character [C1 and EDGX only]:</b>  L = Do Not Expose order via Step-Up Mechanism (SUM)  S = Expose order via Step Up Mechanism (SUM)<sup>2</sup></p>
<i>RoutingInst</i> <i>(Complex)</i> <i>(C1, C2, and EDGX only)</i>	4	Text	<p>Corresponds to <i>RoutingInst</i> (9303) in Cboe FIX.</p> <p><b>1<sup>st</sup> character:</b></p> <p>B = Book Only (will remove from local book), allowed to interact with both single-leg and other complex orders.  D = Complex Book Only, allowed to interact with other complex orders only<sup>3</sup>.  P = Post Only (adds liquidity only)</p> <p><b>2<sup>nd</sup> character:</b>  L = Do Not Expose order via Complex Options Auction (COA)  S = Expose order via Complex Options Auction (COA)<sup>4</sup></p>
<i>RoutStrategy</i>	6	Text	<p>Corresponds to <i>RoutStrategy</i> (9400) in Cboe FIX.</p> <p><b>All exchanges:</b>  ROUT = Book + Street  DIRC<sup>5</sup> = Book + Directed IOC or Directed ISO if ExecInst = f  SWPA = (default) Book + Sweep Street</p>

<sup>1</sup> Post Only orders on EDGX with DisplayIndicator (Fix Tag 9479) = R will be cancelled back even if they would be immediately executable with price improvement **[C1, C2, and EDGX Only]**.

<sup>2</sup> Routable Orders identified with *RoutingInst* = R, RS, S, SS, X or XS, and *RoutStrategy* = ROUT, and *AuctionId* not supplied, or Non-Routable Orders identified with *RoutingInst* = BS and *ExecInst* not f and *TimeInForce* not 4 and *MinQty* not supplied will participate in the Step-Up Mechanism (SUM) before routing, booking, or cancelling back.

<sup>3</sup> Only valid with *TimeInForce* values of 0 (Day) or 3 (IOC), otherwise order will be rejected.

<sup>4</sup> All non-IOC Complex Orders will be eligible for Complex Options Auction (COA) unless otherwise specified.

<sup>5</sup> Field *ExDestination* must be populated with *RoutStrategy* = DIRC. Must be specified when sending non-book only ISO, otherwise the order will be rejected.

Field	Length	Data Type	Description
<i>SecondaryExecID</i>  (C1, C2, and EDGX only)	8	Binary	<p>Indicates whether a fill or partial fill is a complex instrument fill or a single leg fill that comprises a complex execution.</p> <ul style="list-style-type: none"> <li>• If <i>SecondaryExecID</i> (527) is not present, the fill is a single leg fill only.</li> <li>• If <i>SecondaryExecID</i> is present and is the same as the <i>ExecID</i> (17), the fill represents a complex execution for which associated single leg fills will follow.</li> <li>• Single leg fills associated with a complex execution will contain a <i>SecondaryExecID</i> of the associated complex execution.</li> </ul>
<i>SecondaryOrderID</i>	8	Binary	<p>Corresponds to <i>SecondaryOrderID</i> (198) in Cboe FIX.</p> <p>Denotes an alternative <i>OrderID</i> which is present on Cboe market data feeds (for example, to hide that a reserve (iceberg) order has reloaded). Or, <i>OrderID</i> of the contra side of a prevented match.</p>
<i>SendTime</i>	8	DateTime	<p>GMT timestamp when the mass cancel or purge was sent by the Market Maker to the Exchange. This timestamp is required to be at least in millisecond granularity but the CAT NMS Plan requires Industry Members to report the <i>SendTime</i> with the finest increment supported by the Industry Member.</p> <p>This is required to be populated whenever a mass cancel or purge message is expected to cancel one or more Market Maker (<i>capacity=M</i>) quotes that were submitted using the <i>Quote Update</i> message so that the appropriate timestamp can be captured and sent to the CAT.</p> <p>This field must be populated on all Cancel Order and Purge Order messages.</p>
<i>SenderLocationID</i>  (C1 only)	1	Alphanumeric	<p>Corresponds to <i>SenderLocationID</i> (142) in Cboe FIX.</p> <p>F = Floor &lt;blank&gt; = (or not present) for electronic execution.</p>
<i>SessionEligibility</i>  (C1 only)	1	Alpha	<p>Corresponds to <i>SessionEligibility</i> (22017) in Cboe FIX.</p> <p>R = (default) Order participates in Regular Trading Hours A = Order participates in both Global and Regular Trading Hours. Also allows for participation in Curb Trading Session. B = Order participates in both RTH and Curb Session.</p>
<i>Side</i>	1	Alphanumeric	<p>Corresponds to <i>Side</i> (54) in Cboe FIX.</p> <p>1 = Buy 2 = Sell 5 = Sell Short (stock leg only) (C1 and EDGX only) 6 = Sell Short Exempt (stock leg only) (C1 and EDGX only)</p>
<i>StopPx</i>	8	Binary Price	<p>Corresponds to <i>StopPx</i> (99) in Cboe FIX.</p> <p>Stop price. Required if <i>OrdType</i> = 3 (Stop) or 4 (Stop Limit). Stop and Stop Limit orders will only be triggered off Last Sale Eligible trades. Stop/Stop Limit orders will only elect based off of RTH quotes and trades.</p>
<i>StrategyID</i>  (C1 only)	1	Alphanumeric	<p>Corresponds to <i>StrategyID</i> (22002) in Cboe FIX.</p> <p>Used to declare when a strategy is used.</p>

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Field	Length	Data Type	Description
			C = Conversion R = Reversal M = Merger S = Short stock interest J = Jelly roll
<i>StrikePrice</i>	8	Binary Price	Corresponds to <i>StrikePrice</i> (202) in Cboe FIX. Strike Price for option, 0 – 999,999.99
<i>SubLiquidityIndicator</i>	1	Alphanumeric	Additional information about an execution. <b>Cboe may add additional values without notice. Members must gracefully ignore unknown values.</b> ASCII NUL (0x00) = No Additional Information S = Execution from order that set the NBBO B = Step Up Mechanism <b>(C1 and EDGX Only)</b> U = Market Turner <b>(C1 Only)</b> b = AIM <b>(C1 and EDGX Only)</b> C = Carried D = Done For Day Q = QCC <b>(C1 and EDGX Only)</b> s = SAM <b>(C1 and EDGX Only)</b>
<i>Subreason</i>	1	Alphanumeric	Additional detail for an order reject or cancellation. Corresponds to the first character in <i>Subreason</i> (22058) in Cboe FIX. See <b>Order Subreason Codes</b> for a list of possible subreasons.
<i>Symbol</i>	8	Alphanumeric	Corresponds to <i>Symbol</i> (55) in Cboe FIX. Entire Cboe format symbol
<i>TargetPartyID</i> <b>(C1 and EDGX only)</b>	4	Alpha	Corresponds to <i>TargetPartyID</i> (1462) in Cboe FIX. A valid Parent ID of the Directed Market Maker <b>(EDGX only)</b> or Preferred Market Maker <b>(C1 only)</b> . Required for directed orders. On a New Order Cross message, this field is only applicable to the Agency order.
<i>TiedHedge</i> <b>(C1 only)</b>	1	Alpha	Corresponds to <i>TiedHedge</i> (22018) in Cboe FIX. Order is a tied hedge. N = (Default) No Y = Yes

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Field	Length	Data Type	Description
<i>TimeInForce</i>	1	Alphanumeric	<p>Corresponds to <i>TimeInForce</i> (59) in Cboe FIX.</p> <p>0 = Day - (Default) Expires at end of market day.      1 = GTC* - Remains in system until executed, cancelled or option expires.      2 = At the Open - Will remain queued and only interact in the 'Cboe Opening Process' (BZX, C2, and EDGX only) or the Cboe Opening Auction (C1 only).      3 = IOC - Portion not filled immediately is cancelled. Market orders are implicitly IOC for non-complex orders.      4 = FOK - An IOC where the entire size must be filled, else the order will be cancelled back. Not compatible with Step-Up Mechanism (SUM).      6 = GTD* - Expires at specified <i>ExpireTime</i> for a specified day.      7 = At the Close - Orders held for execution until 180 seconds before series is scheduled to close.</p> <p><i>*Bulk Quoting Ports will only support TimeInForce values of Day or GTD with a same day expiration on C1, C2, and EDGX.</i></p>
<i>TradeDate</i>	4	Date	Corresponds to <i>TradeDate</i> (75) in Cboe FIX.
<i>TradeThroughAlertType</i>  (C1 only)	1	Alphanumeric	<p>Corresponds to <i>TradeThroughAlertType</i> (21098) in Cboe FIX.</p> <p>Indication of a type of trade through.</p> <p>0 = No trade through      1 = NBBO      2 = BBO (local best bid or offer)      3 = SBBO (market quote of complex derived by legs)      4 = Book trade through (trade through customer size)      5 = Due Diligence trade through</p>
<i>WorkingPrice</i>	8	Binary Price	<p>Corresponds to <i>WorkingPrice</i> (9690) in Cboe FIX.</p> <p>Only present if an order is fully or partially booked. If price had to be adjusted to a less aggressive value for some reason, the adjusted price will be reported here, otherwise equals price.</p>

## 8 Reason Codes

### 8.1 Order Reason Codes

The following is a list of all order related reason codes used by Cboe. These reason codes are used in a variety of contexts (order cancellations and order rejections). All reasons are not valid in all contexts. The reason code will be followed by free form text. The specific text the system delivers may vary from the text listed below, to provide clarification of the reject reason. Cboe may add additional reason codes without notice. Members must gracefully ignore unknown values.

A = Admin  
D = Duplicate identifier (e.g., ClOrdID)  
F = Could not reflect to consolidated quote (OPRA)  
H = Halted  
I = Incorrect data center  
J = Too late to cancel  
K = Order rate threshold exceeded  
L = Order would lock or Cross NBBO  
M = Order size exceeded  
N = Ran out of liquidity to execute against  
O = ClOrdID doesn't match a known order  
P = Can't modify an order that is pending fill  
Q = Waiting for first trade  
R = Routing Unavailable  
T = Fill would trade through the NBBO  
U = User requested  
V = Would wash  
W = Add liquidity only order would remove  
X = Order expired  
Y = Symbol not supported  
Z = Unforeseen reason  
c = Only Close transactions accepted  
f = Risk management EFID or Custom Group ID level  
m = Market access risk limit exceeded  
o = Max open orders count exceeded  
r = Reserve reload  
s = Risk management risk root level  
w = Would remove on unslide  
x = Crossed market  
y = Order received by Cboe during replay  
z = Session End  
+ = Risk management EFID Group level

## 8.2 Quote Reason Codes

The following is a list of all quote reason codes used by Cboe. All reasons are not valid in all contexts. The reason code will be followed by free form text. The specific text the system delivers may vary from the text listed below, to provide clarification of the reject reason. Cboe may add additional reason codes without notice. Members must gracefully ignore unknown values.

C = Invalid EFID (*ClearingFirm*)  
D = Invalid WashId  
E = Invalid SessionEligibility  
F = Not enabled for quotes  
I = Incorrect data center  
L = Invalid QuoteCnt  
M = Symbols not on same matching engine  
P = Invalid PostingInstruction  
Q = Invalid QuoteUpdateID  
R = Risk root does not match across quotes  
S = Symbol not found  
U = Message unable to be sent to Matching Engine  
W = Invalid WashPreventType  
a = Admin  
c = Invalid Capacity  
d = Close only  
f = Risk management EFID or Custom Group ID level  
m = Invalid WashMethod  
n = Exceeds max notional value per order  
o = Invalid Open/Close  
p = Risk management risk root level  
r = Invalid Remove  
s = Invalid Side  
t = Invalid SendTime  
u = Symbol range unreachable  
x = Exceeds max size per order  
y = Quote received by Cboe during replay

## 8.3 Order and Quote Subreason Codes

The following is a list of subreason codes used to indicate additional detail for order rejections or cancellations. The code will be followed by free form text. The specific text the system delivers may vary from the text listed below, to provide clarification of the reject or cancel reason. Cboe may add additional values without notice. Users must gracefully ignore unknown values.

- A = Purge/mass cancel EFID level by user
- B = Purge/mass cancel Symbol level by user
- C = Purge/mass cancel Custom Group ID level by user
- E = EFID level lockout by Cboe Trade Desk admin
- J = Firm disconnect
- K = ME disconnect
- L = Unregistered MM Account
- S = Minimum size requirement not met
- T = Cboe Trade Desk admin
- f = Risk management EFID level by rule
- s = Risk management Symbol level by rule
- + = Risk management EFID Group level by rule

## 9 List of Message Types

### 9.1 Member to Cboe

Message Name	Level	Type	Sequenced
Login Request	Session	0x37	No
Logout Request	Session	0x02	No
Client Heartbeat	Session	0x03	No
New Order	Application	0x38	Yes
New Order Cross	Application	0x41	Yes
New Complex Order	Application	0x4B	Yes
New Order Cross Multileg	Application	0x5A	Yes
Cancel Order	Application	0x39	Yes
Modify Order	Application	0x3A	Yes
Quote Update	Application	0x55	Yes
Reset Risk	Application	0x56	Yes
Quote Update (Short)	Application	0x59	Yes
Purge Orders	Application	0x47	Yes
New Complex Instrument	Application	0x4C	Yes

### 9.2 Cboe to Member

Message Name	Level	Type	Sequenced
Login Response	Session	0x24	No
Logout	Session	0x08	No
Server Heartbeat	Session	0x09	No
Replay Complete	Session	0x13	No
Order Acknowledgment	Application	0x25	Yes
Cross Order Acknowledgment	Application	0x43	Yes
Order Rejected	Application	0x26	No
Cross Order Rejected	Application	0x44	No
Order Modified	Application	0x27	Yes
Order Restated	Application	0x28	Yes
User Modify Rejected	Application	0x29	No
Order Cancelled	Application	0x2A	Yes
Cross Order Cancelled	Application	0x46	Yes
Cancel Rejected	Application	0x2B	No
Order Execution	Application	0x2C	Yes
Trade Cancel or Correct	Application	0x2D	Yes
Purge Rejected	Application	0x48	No
Mass Cancel Acknowledgment	Application	0x36	No
Complex Instrument Accepted	Application	0x4D	Yes
Complex Instrument Rejected	Application	0x4E	No
Quote Update Acknowledgment	Application	0x51	Yes
Quote Restated	Application	0x52	Yes
Quote Cancelled	Application	0x53	Yes
Quote Execution	Application	0x54	Yes
Risk Reset Acknowledgment	Application	0x57	No

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Quote	Update	Rejected	Application	0x58	No
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## 10 Port Attributes

The table below lists BOE port attributes that are configurable on the port or firm level. Changes to these attributes can be made by contacting the Cboe Trade Desk. Port Attribute changes made intra-day by the Cboe Trade Desk will not affect existing quotes or orders. In order for the desired intra-day port attribute to be applied to existing quotes or orders, you must first cancel or send a quote with zero price and size and then re-enter the order or quote.

Attribute	Default	Description
Allow Directed ISO *	Yes	Allow or disallow ISO orders directed to other market centers.
Allow ISO *	Yes	Allow or disallow ISO orders.
Allow MTP Decrement Override *^	No	Overrides the exception that requires both the resting and inbound order to be marked as "Decrement".
Allow Sponsored Participant MTP Control *^	No	Allow Sponsored Participant to override port default for match trade prevention by using <i>PreventMatch</i> on the order level.
Allow Test Symbols Only	Disabled	Allow or disallow orders in non-test symbols
Allowed Clearing Executing Firm ID(s) *	All EFIDS	Executing Firm ID(s) allowed for trading on the port.
Cancel on Disconnect	All	<p>Cancels open orders upon order handler session disconnect; both graceful and ungraceful. If Cancel On Disconnect is set, open orders in Symbols not in Closed state at the time of the disconnect are cancelled.</p> <p>All = Cancel Day and GTC/GTD orders            Day = Cancel only Day orders            None = Disabled</p> <p>BOE Quoting ports require Cancel on Disconnect set to All or Day. Default will be used if not specified.</p>
Cancel on ME Disconnect	All	<p>Controls whether orders are cancelled or preserved on a Matching Unit failover and provides for the ability to preserve GTC/GTD orders.</p> <p><b>For BZX, C2, and EDGX</b>, in any event, if a failover takes longer than 5 minutes, all orders are cancelled (including GTC/GTD Orders).</p> <p><b>For C1</b> if a failover takes longer than 15 minutes, all orders are cancelled (including GTC/GTD Orders).</p> <p>All = Cancel Day and GTC/GTD orders            Day = Cancel only Day orders            None = Disabled</p> <p>BOE Bulk Quoting ports require Cancel on ME Disconnect set to All or Day. Default will be used if not specified.</p>
Cancel on Regulatory Halt	All (BZX and EDGX Only) None (C1 and C2 Only)	<p>Cancels open orders upon receipt of a Regulatory Halt.</p> <p>All = Cancel Day and GTC/GTD orders            Day = Cancel only Day orders            None = Disabled</p>
Cancel on Reject ^	No	Cancels an order upon a modify reject.

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<b>Attribute</b>	<b>Default</b>	<b>Description</b>
Cancel Open Orders on DROP Port Disconnect *	None	<p>Only applicable if “Reject Orders on DROP Port Disconnect” has been enabled. When the last Standard FIX DROP port associated with an order handler session has disconnected, open orders, associated with the session are cancelled.</p> <p>All = Cancel Day and GTC/GTD orders  Day = Cancel only Day orders  None = Disabled</p> <p>Note this parameter applies to Standard FIX DROP ports and not Order-By-Order DROP ports (ODROP).</p>
Carried Order Restatements	No	<p>If the Carried Order Restatements port attribute is set, unsolicited Order Acknowledgement messages representing GTC/GTD orders loaded by the system at startup will be sent after the Login Response message and before any other messages for each product.</p> <p>Note that Carried Orders are restated to customers using Order Acknowledgement messages with <i>BaseLiquidityIndicator=A</i> and <i>SubLiquidityIndicator=C</i>.</p> <p>Note that any changes made to any port attribute will not be enforced on carried GTC orders. Members wishing to apply updated port attributes to resting GTC orders must cancel those orders and resubmit them following the effective time of the port attribute change.</p>
Crossed Market Cancel / Reject \$	No	<p>Reject new orders when the NBBO in the security is crossed. Routable orders will have any remaining quantity cancelled back when the order returns to the book. Order modifications causing a loss in priority will result in a cancel of the original order if the NBBO is crossed upon receipt of the modify request.</p> <p>Quotes are always accepted, even in a crossed market.</p>
Default Account	None	<p>Default Account to be used if none is sent on inbound messages. Allows 16 characters or less (ASCII 33-126) but a max of 10 characters will be passed through to the OCC Customer ID Field.</p>
Default Attributed Quote **	X	<p>Default value for <i>AttributedQuote</i>. May override at order level.</p> <p>C† = Attribute <i>ClientIDAttr</i> only (C1 only)  N = Don't Attribute (may override at order level)  Y = Attribute EFID only  Z = Attribute EFID and <i>ClientIDAttr</i>  X* = (Default) Never Attribute (may not 171efinitionden at order level)</p> <p>*This setting may only be changed after executing Attribution Addendum to Exchange User Agreement (<a href="#">EDGX</a> and <a href="#">BZX</a> only).</p>
Default <i>ClearingOptionalData</i>	None	<p>Default <i>ClearingOptionalData</i> to be used if none is sent on inbound messages. Allows 16 characters or less (ASCII 33-126).</p>
Default <i>ClientIDAttr</i>	None	<p>Default <i>ClientIDAttr</i> to be used if none is specified on inbound messages.</p>

Attribute	Default	Description
Default <i>EquityExDestination</i> † <i>(C1 and EDGX only)</i>	C	Default <i>EquityExDestination</i> to be used if none is specified on inbound messages.
Default <i>EquityPartyID</i> <i>(C1 and EDGX only)</i>	None	Default <i>EquityPartyID</i> to be used if none is specified on inbound messages.
Default Executing Firm ID	None	Default Executing Firm ID to use if none is sent on a New Order or New Complex Order message.
Default <i>FloorDestination</i> <i>(C1 only)</i>	None	Specifies a default PAR workstation (ex. W001) to route to on the floor (or 'PARO' to route to the Floor PAR Official of the underlying symbol) if not specified on inbound messages. 4 characters or less (ASCII 33-126).
Default <i>FloorRoutingInst</i> * <i>(C1 only)</i>	E	D = Direct. Do not attempt to process electronically E = Electronic only X = Route to floor if unable to process electronically. *When <i>FloorRoutingInst</i> = 'D' or 'X', <i>RoutingInst</i> (9303) must be set to 'B' or 'R' for simple orders; for complex instruments <i>RoutingInst</i> (9303) must be set to 'B'.
Default MTP Value *^+	None	Specifies default value for <i>PreventMatch</i> .
Default Price Sliding	S ( <i>BZX only</i> ) P ( <i>EDGX/C2 only</i> )	Default price sliding behavior. See <i>DisplayIndicator</i> for details.
Default Routing Instruction +	9303=RS 9350=RTI 9400=SWPA	Specifies a default value for routing. Fields can be overridden at the order level. The defaults are <i>RoutingInst</i> = RS, <i>RouteDeliveryMethod</i> = RTI, and <i>RoutStrategy</i> = SWPA.
Done For Day Restatements	No	If the Done For Day Restatements port attribute is set, unsolicited Order Acknowledgement messages representing GTC/GTD orders that will be carried into the next session will be sent after the end of the trading session and before the system is recycled. Note that Done For Day Restatements are restated to customers using Order Acknowledgement messages with <i>BaseLiquidityIndicator</i> = A and <i>SubLiquidityIndicator</i> = D.
Duplicative Order Protection Action \$	1	Action taken when Duplicative Order Protection criteria is met: 1 = Not enabled. 2 = Reject any offending orders. 3 = Disable port for <i>ClearingFirm</i> . Must call Cboe Trade Desk to reenable.
Duplicative Order Protection Order Count Threshold \$	None	Number of consecutive orders with the same <i>ClearingFirm</i> , <i>Price</i> , <i>OrdQty</i> , and <i>Symbol</i> that must be seen to initiate Duplicative Order Protection Action.
EFID Filter for Purge Ports	None	Specify up to ten EFIDs per purge port for which purges will be permitted. If a purge request specifies an EFID not included in the list of configured EFIDs, the purge request will be rejected. If a purge port is configured with multiple EFIDs and a purge request is sent without any EFIDs specified, the purge will be applied only to the list of configured EFIDs.

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Attribute	Default	Description
EFID Risk Reset	Disabled	<p>Configures how risk may be reset after a risk trip.</p> <p>Disabled = (Default). Will require manually resetting all EFID Group and EFID-Level Risk trips by contacting the Trade Desk.</p> <p>Enabled = Will allow EFID Group and EFID-level Risk resets using <i>RiskReset</i> of 'F' or 'G'.</p>
Enable Market Maker Floor Trade Notifications <i>(C1 only)</i>	No	Enables Market Maker Floor Trade Notifications for specific Market Maker acronyms on a port.
Fat Finger Protection *\$	<p>None <b>(BZX/EDGX only)</b></p> <p>See Web Portal Port Controls Specification for defaults <i>(C2 only)</i></p>	<p>Orders entered through the NBBO by a specified percentage or dollar based limit price tolerance will be rejected. Limits may be different for different price ranges and price ranges may vary across markets.</p> <p>Please see the Web Portal Port Controls Specification for complete details.</p>
Forced Open Cancel Instruction	DoNotCancel	<p>Specifies order handling during a forced opening.</p> <p>DoNotCancel = Preserve Orders (Default) CancelMarket = Cancel Open Market Orders Only (preserve Limit Orders) CancelAll = Cancel All Open Orders</p>
Market Maker Floor Trade Notification Symbology <i>(C1 only)</i>	Cboe	<p>Specifies the symbology used on Market Maker Floor Trade Notifications.</p> <p>Cboe = Six character Cboe Symbol ID OSI = OSI Symbology (<i>PutOrCall</i>, <i>StrikePrice</i>, and <i>MaturityDate</i> will be returned)</p>
Market Maker Reject if Cancel on Disconnect disabled	No	Rejection of Market Maker or Away-Market Maker orders if Cancel on Disconnect is not enabled. Non-Market Maker capacity order swill be unaffected with this confururation.
Maximum Order Dollar Value *	Unlimited	Maximum dollar value per order.
Maximum Order Size *	25,000	Maximum order quantity
Multi-Segment Holiday Day Order Handling <i>(C1 only)</i>	None	<p>Controls whether Day (<i>TimeInForce</i> (59) = 0) orders are cancelled or preserved across holiday trading segments comprising a single business date.</p> <p>None = All Day orders on the book are carried between trading segments Cancel = All Day orders on the book at the conclusion of the current trading segment are cancelled back.</p>

Attribute	Default	Description
Port Order Rate Threshold	5,000 msgs/s  1 msg/sec for test products.	The maximum allowed message rate on the session. When the first non-session level message is received, a one second window begins, during which no more than 4,999 additional non-session level messages are allowed. If the rate is exceeded, all new orders in the time window are rejected, modifies are treated as cancels, and cancels are processed.  Maximum value is 5,000 msgs/sec.  <b>For Bulk Quoting ports, the default threshold is unlimited.</b>  Note: Order handler burst rates towards each matching unit may be limited as described in Section 1.6.1 – Architecture.
Reject Orders on DROP Port Disconnect *	No	If all Standard FIX DROP ports associated with an order entry session experience disconnection, new orders will be rejected until at least one Standard FIX DROP port session is reestablished.  Note this parameter does not apply to Order-By-Order drop ports (ODROP).
Reject Orders on DROP Port Timeout (seconds) *	30 seconds	Only applicable if “Reject Orders on DROP Port Disconnect” is enabled. When the last Standard FIX DROP port associated with an order entry session has disconnected, begin rejecting orders on the order entry session if a Standard FIX DROP session has not been reestablished within this timeout.  Minimum value allowed is 0 seconds.
Send Trade Breaks ^	No	Enables sending of Trade Cancel or Correct messages.
Symbol Order Rate Threshold	5,000 msgs/s	Functions the same as the Port Order Rate Threshold, but is calculated at the symbol level. It is capped by the Port Order Rate Threshold.  Maximum value is 5,000 msgs/sec. <b>For Bulk Quoting ports, the default threshold is unlimited.</b>  Note: Order handler burst rates towards each matching unit may be limited as described in ‘Section 1.6.1 – Architecture’.

\* Sponsored Participants require written approval from Sponsors to update these settings on ports associated with a Sponsor’s MPID.

<sup>+</sup> Port attribute can be overridden on an order-by-order basis.

<sup>^</sup> Requires certification.

<sup>\$</sup> Not supported for quotes.

## 11 Support

Please email questions or comments regarding this specification to [tradedesk@cboe.com](mailto:tradedesk@cboe.com).

## Revision History

Date	Description
June 16, 2014	<i>Version 2.0.2</i> First public release of US Options BOE Version 2 specication.
July 1, 2014	<i>Version 2.0.3</i> Added Hours of Operations section. Corrected Cancel on Disconnect options.
July 3, 2014	<i>Version 2.0.4</i> Added field descriptions for <i>FeeCode</i> and <i>EchoText</i> .
July 7, 2014	<i>Version 2.0.5</i> Removed all return bits from <i>User Modify Rejected</i> V2 messages. No optional return fields are allowed. Corrected a number of optional return bits. Added <i>RoutingInst</i> , <i>RoutStrategy</i> , <i>RouteDeliveryMethod</i> , and <i>ExDestination</i> as optional return bits (byte 8).
July 9, 2014	<i>Version 2.0.6</i> Corrected instances where <i>ContraCapacity</i> and <i>CorrectedSize</i> may be requested as optional return fields.
August 15, 2014	<i>Version 2.0.7</i> Added field descriptions for <i>RoutStrategy</i> , <i>ExDestination</i> , and <i>StopPx</i> .
August 22, 2014	<i>Version 2.0.8</i> Added Super Aggressive When Odd Lot <i>RoutingInst</i> value.
August 26, 2014	<i>Version 2.0.9</i> Added Reason Code of <i>w</i> (Would Remove on Unslide).
August 28, 2014	<i>Version 2.0.10</i> Corrected Bulk Order V2 input bitelds.
September 3, 2014	<i>Version 2.0.11</i> Removed <i>SymbolSfx</i> from allowed fields for New Order V2. Removed <i>DiscretionAmount</i> and <i>PartyID</i> from allowed return bitfields for a number of messages. Corrected data type for <i>AcceptedCount</i> and <i>RejectedCount</i> to be Binary (not Text). Corrected data type for <i>BulkOrderRejectReasons</i> and <i>OrderRejectReason</i> to be Text (not Binary). Removed <i>AccessFee</i> from allowed return bitelds for Order Restated V2. Added clarification on <i>BulkOrderIDs</i> , <i>AskOrderID</i> , and <i>BidOrderID</i> . Added clarification on <i>BulkRejectReasons</i> , <i>AskRejectReason</i> and <i>BidRejectReason</i> .
September 8, 2014	<i>Version 2.0.12</i> Removed <i>ContraBroker</i> from List of Optional fields.
September 9, 2014	<i>Version 2.0.13</i> Removed <i>AccessFee</i> from Order Execution V2 allowed return bitfields.
October 10, 2014	<i>Version 2.0.14</i> Claried ability to reuse <i>ClOrdId</i> with <i>Modify Orders</i> when daily limit trading risk controls are enabled.
November 13, 2014	<i>Version 2.0.15</i> Corrected New Order V2 input bitelds to note that <i>DisplayIndicator</i> is per-mitted.

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January 8, 2015	<i>Version 2.0.16</i> Corrected Order Execution V2 return bitfields to note that <i>SubLiquidityIndicator</i> is not allowed – it's already available in the message body. Minor correction of <i>PreventMatch</i> text (no functional change).
February 19, 2015	<i>Version 2.0.17</i> Added new <i>Capacity</i> values of N, B, and J, effective June 1, 2015.
June 10, 2015	<i>Version 2.0.18</i> Added Reason Code value of T.
June 23, 2015	<i>Version 2.1.0</i> Updated for EDGX Options. Added new fields <i>TargetPartyID</i> and <i>MarketingFeeCode</i> . Updated descriptions to note which fields are BZX Options or EDGX Options specific.
June 23, 2015	<i>Version 2.1.1</i> Added Duplicative Order Protection port attributes.
October 26, 2015	<i>Version 2.1.2</i> Added reason code of T. Updated <i>DisplayIndicator</i> description to note that, per EDGX Options Exchange rules, Display Price Sliding may not be combined with the Post Only instruction.
October 27, 2015	<i>Version 2.1.3</i> Added EDGX as possible <i>ContraBroker</i> value.
October 31, 2015	<i>Version 2.1.4</i> Corrected values for <i>MarketingFeeCode</i> . Changed text to note that <i>TargetPartyID</i> is simply copied back on all response messages.
November 11, 2015	<i>Version 2.1.5</i> Updated Pre-Market Queuing Session time to 7:30am, beginning December 11, 2015, pending SEC approval.
December 24, 2015	<i>Version 2.1.6</i> Updated description of <i>TargetPartyID</i> and <i>Capacity</i> for revised directed order functionality. Added Firm Risk Reset port attribute. Updated description of <i>ClearingFirm</i> .
January 19, 2016	<i>Version 2.1.7</i> Added Mercury as possible <i>ExDestination</i> and <i>ContraBroker</i> value.
February 17, 2016	<i>Version 2.1.8</i> Updated for new branding.
February 25, 2016	<i>Version 2.1.9</i> Added new <i>RestatementReason</i> value of P.
March 23, 2016	<i>Version 2.1.10</i> Updated description of <i>RouteStrategy</i> to state that routable ISOs must be sent using DIRC. Updated the minimum value of "Reject Orders on DROP Port Timeout" to be 0 seconds.
May 16, 2016	<i>Version 2.1.11</i> Added new field <i>AuctionID</i> and added S as a possible second character for <i>RoutingInst</i> , along with information about the Step-Up Mechanism (SUM). <i>AuctionID</i> replaced <i>EffectiveTime</i> in New Order V2 and all of the return bitfields.

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June 10, 2016	<i>Version 2.1.12</i> Display Price Sliding support eliminated for EDGX Options effective July 11, 2016.
June 28, 2016	<i>Version 2.1.13</i> Added new <i>SubLiquidityIndicator</i> of B for Step Up Mechanism.
August 3, 2016	<i>Version 2.1.14</i> WAIT orders will be eliminated upon migration of BZX Options to its next generation matching engine. Refer to Release Notes on Bats' public web site for deployment schedule.
August 17, 2016	<i>Version 2.1.15</i> Corrected <i>ExDestination</i> value of EDGX Options to be G.
September 2, 2016	<i>Version 2.2.0</i> Add new message types and fields to support cross orders ( <b>EDGX Only</b> ). Includes New Order Cross, Cross Order Acknowledgment, Cross Order Rejected, Cross Order Cancelled, and supporting fields. Effective 11/11/2016.
October 4, 2016	<i>Version 2.2.1</i> Add <i>RoutingFirmID</i> as a valid field for single order messages.
November 11, 2016	<i>Version 2.2.2</i> Added new <i>SubLiquidityIndicator</i> of b for Bats Auction Mechanism. Updated Display Price Sliding to indicate it is <b>BZX only</b> . Added clarification that <i>ClearingAccount</i> is required when <i>Capacity</i> is M or N.
December 15, 2016	<i>Version 2.2.3</i> Removed <i>RoutingInst</i> value of C (Book Only WAIT order). Clarified which <i>RoutingInst</i> values are allowed for Bulk Orders. Added port param for rejecting MM capacity orders if Cancel on Disconnect is disabled.
January 24, 2017	<i>Version 2.2.4</i> Added support for MIAX Pearl routing. Added 2 (Qualified Contingent Cross) as an acceptable <i>CrossType</i> for New Order Cross messages.
January 27, 2017	<i>Version 2.2.5</i> Added new message types and fields to support purge ports. Includes Purge Orders V2, Purge Rejected V2, and supporting fields. Modified New Order V2 message input bitfields to include the optional <i>CustomGroupID</i> field. Effective Date March 1, 2017. Added <i>RoutingFirmID</i> to Modify Order V2 and Cancel Order V2 messages.
February 27, 2017	<i>Version 2.2.6</i> Correct <i>MassCancel</i> field description in Purge Orders V2 message examples from lockout to single ack.
March 2, 2017	<i>Version 2.2.7</i> Add new field type <i>Date</i> .
March 22, 2017	<i>Version 2.2.8</i> Remove Suppress Cancels on Sessions Close port attribute.
March 22, 2017	<i>Version 2.2.9</i> Add descriptions of port attributes "Allow Test Symbols Only", "Port Order Rate Threshold", and "Symbol Order Rate Threshold".

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May 11, 2017	<p><i>Version 2.3.0</i></p> <p>Add new message types and fields to support complex orders (<b>EDGX Only</b>). Includes New Complex Order, New Complex Instrument, Complex Instrument Accepted, Complex Instrument Rejected, and supporting fields. Effective 10/23/2017.</p>
June 13, 2017	<p><i>Version 2.3.1</i></p> <p>Removed support for <i>TimeInForce</i> value of 4 (Fill-or-Kill) on complex orders.</p> <p>Added clarification of valid <i>TimeInForce</i> values used with <i>RoutingInst</i> value of D on complex orders.</p> <p>Corrected options for port attribute "Cancel on Disconnect".</p>
July 7, 2017	<p><i>Version 2.3.2</i></p> <p>Corrected field type and size of <i>RevisedLegs</i>.</p> <p>Fixed naming inconsistency of <i>AttributedQuote</i> sometimes being called <i>AttributedOrder</i>.</p> <p>Clarified symbology use on Order Execution V2 messages for complex orders.</p>
July 25, 2017	<p><i>Version 2.3.3</i></p> <p>Added <i>SecondaryExecId</i> to Order Execution V2.</p> <p>Added new Mass Cancel/Purge Request specification style using <i>MassCancelInst</i> field</p> <p>Effective 10/23/2017.</p>
July 28, 2017	<p><i>Version 2.3.4</i></p> <p>Updated description of use of <i>MassCancelInst</i> field in Purge Orders V2 message</p> <p>Effective 10/23/2017.</p>
August 3, 2017	<p><i>Version 2.3.5</i></p> <p>Added <i>RiskReset</i> and <i>CustomGroupId</i> to New Complex Order message.</p>
August 7, 2017	<p><i>Version 2.3.6</i></p> <p>Corrected size of <i>NoOfSecurities</i> field in message description and examples.</p>
August 9, 2017	<p><i>Version 2.3.7</i></p> <p>Added <i>ClearingFirm</i> optional field to New Complex Instrument message.</p>
August 14, 2017	<p><i>Version 2.3.8</i></p> <p>Corrected Purge Orders message biteld ordering and added <i>RoutingFirmID</i>.</p>
September 1, 2017	<p><i>Version 2.4.0</i></p> <p>Removed references to V2 as the V1 specification was deprecated.</p> <p>Added C2-specific references. Updated Cancel on Disconnect, Cancel on ME Disconnect, Cancel on DROP Port Disconnect and Cancel on Regulatory Halt to all provide GTC filtering.</p>
September 15, 2017	<p><i>Version 2.4.1</i></p> <p>Added support for C2 Feature Pack 1. Available in Certification effective 9/15/17 and in Production effective 10/13/17.</p>
October 5, 2017	<p><i>Version 2.4.2</i></p> <p>Updated explanatory text for <i>MassCancelInst</i> lockout behavior.</p> <p><i>TimeInForce</i> = 2 (At the open) is supported effective 10/23/17.</p> <p>Updated C2 Feature Pack 1 effective date from 10/6/17 to 10/13/17.</p> <p>Removed introduction of ContraTrader and ContraBroker and deprecation of ContraCapacity from C2 Feature Pack 1 release.</p> <p>Removed Side and OrderQty from the New Complex Instrument example.</p>

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October 17, 2017	<p><i>Version 2.4.3</i></p> <p>Updated <i>Symbol</i> in Complex Instrument Accepted message to indicate this is the complex instrument id.</p> <p>Cboe branding/logo changes.</p>
November 7, 2017	<p><i>Version 2.4.4</i></p> <p>Updated to indicate that Bulk Order Acknowledgements are unsequenced.</p> <p>Corrected various spelling errors, field name and case inconsistencies.</p> <p>Updated Return Order Bitfields for Cross Order Acknowledgement, Cross Order Rejected and Cross Order Cancelled.</p> <p>Added C2 Feature Pack 2 enhancements for <i>ContraTrader</i> and <i>ContraBroker</i> values effective on 12/8/17.</p>
December 6, 2017	<p><i>Version 2.4.5</i></p> <p>Corrected Cross Order Cancelled message type to 0x46.</p> <p>Updated effective date of C2 Feature Pack 2 to 12/15/17.</p>
December 15, 2017	<p><i>Version 2.4.6</i></p> <p>Updated effective date of C2 Feature Pack 2 to 01/05/18</p> <p>Corrected length of <i>DrillThruProtection</i> field. It is eight bytes.</p>
December 27, 2017	<p><i>Version 2.4.7</i></p> <p>Added Done For Day Restatement functionality. Protocol feature section 1.6.2 added to describe the feature. Done For Day Restatements port attribute added to enable and disable feature, which defaults to disabled.</p> <p>Default for Carried Order Restatements changed from enabled to disabled.</p> <p>Updated <i>Modify Order</i> message to clarify when an order loses time priority.</p>
January 12, 2018	<p><i>Version 2.4.8</i></p> <p>Fixed incorrect <i>GroupCnt</i> and <i>MessageLength</i> in Bulk Order example.</p> <p>Added GTC/GTD persistence across trading sessions to BZX and EDGX (Effective in EDGX on 1/26/18 and BZX on 2/2/18).</p>
January 24, 2018	<p><i>Version 2.4.9</i></p> <p>Removed reference to EFID needing to be registered in the underlying and <i>Capacity</i> needing to be set to 'M' in order to send Bulk Orders for C2 in section 4.1.6.</p> <p>GTCs and GTDs that expire on a future date cannot be sent on Bulk Order Ports.</p> <p>Added 'L' reason code to the list of reason codes in Section 8.</p>
January 30, 2018	<p><i>Version 2.4.10</i></p> <p>Added Post Only restriction for Bulk Order message on EDGX Options effective 3/23/18.</p>
February 20, 2018	<p><i>Version 2.5.0</i></p> <p>Update GTC/GTD functionality to allow order cancelation after trading sessions ends.</p>
March 21, 2018	<p><i>Version 2.5.1</i></p> <p>Updated OSI Root to Underlying symbology for EDGX Options (effective 6/11/18) and BZX (effective 6/25/18) Options.</p> <p>Removed <i>AllocQty</i> as an available return bitfield on Trade Cancel or Correct message.</p>
March 26, 2018	<p><i>Version 2.5.2</i></p> <p>Updating <i>RoutStrategy</i> (9400) default behavior to 'SWPA' for EDGX on 04/13/18 and BZX on 04/19/18.</p>
April 4, 2018	<p><i>Version 2.5.3</i></p> <p>Removed Post Only as a valid RoutingInst for Complex Orders on C2. Changed Default Attributed Quote on EDGX to Never.</p>

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April 10, 2018	<i>Version 2.5.4</i> <i>CumQty</i> to be populated on leg fills related to complex executions (effective 4/27/18).
April 26, 2018	<i>Version 2.6.0</i> Added optional fields to the <i>Purge Rejected</i> message to accommodate optional return of the <i>MassCancelId</i> field from the associated <i>Purge Request</i> message (Effective 6/29/18). Added <i>RestatementReason</i> = S for Ship and Post restatements.
May 23, 2018	<i>Version 2.6.1</i> Defined <i>StrikePrice</i> in the List of Optional Fields. Corrected the definition of <i>LegStrikePrice</i> to an eight byte, Binary Price field. Corrected OSI to Underlying Symbology effective dates. Additional clarification regarding valid <i>RoutingInst</i> values for BOE Bulk on EDGX and C2.
May 30, 2018	<i>Version 2.6.2</i> <i>MassCancelId</i> moved to bit 8 from bit 1 in byte 15 of the Return Bitfields for a <i>Purge Rejected</i> message.
June 29, 2018	<i>Version 2.6.3</i> Updated <i>MassCancelInst</i> to indicate that 4 <sup>th</sup> character is applicable to both C2 and EDGX. Added detail for 5 <sup>th</sup> character, which was missing from the BOE specification. Corrected example for <i>Purge Rejected</i> message.
August 7, 2018	<i>Version 2.6.4</i> Updated information about mass cancel message rate limitations (effective 08/15/18).
September 20, 2018	<i>Version 2.6.5</i> For Cancel Rejected message added <i>MassCancelId</i> as an optional bitfield. (effective 9/14/18) Updated Bulk Port Order information to indicate that simple and complex auction responses are now accepted over Bulk Order Ports. (effective 10/5/18).
October 8, 2018	<i>Version 2.7.0</i> Added support for new message types and fields to support new quoting interface. Added effective dates for deprecating Bulk Order message type. Added support for Risk Reset message.
October 19, 2018	<i>Version 2.7.1</i> Added "R" Quote Reject Reason. Added support for C1 Migration Feature Pack 1, including support for complex reserve orders, <i>ClearingOptionalData</i> and EFID Group level risk functionality. Available in Certification effective 11/2/18 and in Production effective 11/29/18.
October 26, 2018	<i>Version 2.7.2</i> Added <i>Side</i> as a required field for <i>Quote Cancelled</i> and <i>Quote Restated</i> messages.
November 5, 2018	<i>Version 2.7.3</i> Clarifications added to the liquidity removal behavior for BOE Bulk/Quoting ports effective with C1 Feature Pack 2. Added Complex Post Only value of 'P' to <i>RoutingInst</i> (effective in EDGX and C2 TBD).
November 9, 2018	<i>Version 2.7.4</i> Added support for short form <i>Quote Update</i> message effective with C1 Feature Pack 2.
November 16, 2018	<i>Version 2.8.0</i> New message types, references, and fields in support of Cboe Options migration to Bats Tech.

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November 20, 2018	<p><i>Version 2.8.1</i></p> <p>Added <i>SubLiquidityIndicator</i> values for QCC and SAM.</p> <p>Updated definition for the value 'K' of Quote Restated message <i>RestatementReason</i> field.</p> <p><i>TradingSessionID</i> was named incorrectly and has been replaced by <i>SessionEligibility</i>. This field corresponds to Tag 336 in Cboe FIX. Allowed values have been changed as well as associated input and return bits.</p> <p>For Reset Risk message, corrected <i>RiskRoot</i> field length to 6.</p> <p>For Bulk Order message example, corrected <i>OsiRoot</i> to <i>RiskRoot</i>.</p> <p>Corrected name of optional field from <i>OsiRoot</i> to <i>RiskRoot</i>.</p>
November 27, 2018	<p><i>Version 2.8.2</i></p> <p>Added additional <i>RiskResetResult</i> values.</p> <p>Added "r = invalid remove" <i>QuoteResult</i> value.</p> <p>Noted that <i>Capacity</i> changes will not be honored when modifying a quote.</p> <p>Updated Default Attributed Quote port attribute for Cboe Options Exchange.</p> <p>Corrected New Order Cross Multileg message type to 0x5A.</p> <p>Updated effective date for Complex Post only to TBD.</p>
December 6, 2018	<p><i>Version 2.8.3</i></p> <p>Added <i>QuoteReason</i> codes D, m, u, and W.</p> <p>Removed incorrect <i>MaxFloor</i> and <i>DisplayRange</i> bit fields from New Order Cross Multileg.</p> <p>Updated port attribute details for <i>Cancel on Regulatory Halt</i> to indicate Cancel All is default for BZX and EDGX and Cancel None is default for C1 and C2.</p> <p>Added note to the optional fields, <i>Attributed Quote</i> and <i>ClientIDAttr</i>, indicating values available in C1 Feature Pack 4.</p> <p>Added note to <i>Default Attributed Quote</i> and <i>Default ClientIDAttr</i> port attributes indicating values available in C1 Feature Pack 4.</p>
December 20, 2018	<p><i>Version 2.8.4</i></p> <p>For Reset Risk Acknowledgement message, added <i>&lt;space&gt;=Ignored</i> value to <i>RiskResetResult</i> field.</p> <p>Updated New Order Cross Multileg, <i>Price</i> field description to remove "Must be non-negative".</p> <p>Updated optional field <i>ExecInst</i> description to indicate it is used for New Order Cross Multileg.</p> <p>"Invalid Remove" quote result was incorrectly identified as 's' and was updated to be 'r' in Quote Update Acknowledgement message.</p> <p>Attributing by <i>ClientIDAttr</i> requires a value of "C" rather than "X" for the <i>AttributedQuote</i> field.</p> <p>Clarified use case and allowable granularity for <i>SendTime</i> on Quote Update message.</p>
January 11, 2019	<p><i>Version 2.8.5</i></p> <p>Updated description of <i>FloorDestination</i>.</p> <p>Corrected default value <i>Default FloorRoutingInst</i> port attribute to 'E' for Electronic only.</p> <p>Regarding <i>Login Response</i>, clarified that while a subset of units can be provided in the <i>Login Request</i>, all units will be provided in the <i>Login Response</i>.</p> <p>Added support for MIAX Emerald routing (effective 03/01/19).</p> <p>Added Floor Routing protocol feature for C1.</p> <p>Added support for Not Held orders (<i>ExecInst</i> (18) = 1) for C1.</p> <p>Updated descriptions for <i>Cancel on Disconnect</i> and <i>Cancel on ME Disconnect</i> Port Attributes for Bulk Quoting Ports.</p>

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January 17, 2019	<p><i>Version 2.8.6</i></p> <p>Updated description of intra-day changes made to Port Attributes.</p> <p>For the Quote Update Acknowledgement message, removed "J" as a value for <i>QuoteResult</i> as it was replaced by newer rejection values.</p> <p>Added effective date for Complex Post only (EDGX 01/30/19 , C2 02/06/19).</p>
February 06, 2019	<p><i>Version 2.8.7</i></p> <p>Added Order Reason Code 'z' to section 8.1.</p> <p>Market orders are implicitly IOC for non-complex orders only.</p> <p>Added Simple Order Auction information related to BAM/AIM, SUM, and QCC for C1 Feature Pack 5.</p>
February 19, 2019	<p><i>Version 2.8.8</i></p> <p>Support added for Floor Represenation restatements. Additional Protocol Feature added.</p> <p>Added <i>SessionEligibility</i> of "A" to Quote Update message.</p> <p>Updated reference to <i>SessionEligibility</i> FIX Tag, from 336 to 22017.</p>
March 1, 2019	<p><i>Version 2.8.9</i></p> <p>Added new value of 'f = Unsolicited Floor Action' to <i>RestatementReason</i> field on Order Restated message.</p> <p>Updated New Complex Order message type to not support legging in to the simple book on cross product spreads.</p>
March 13, 2019	<p><i>Version 2.8.10</i></p> <p>Updated effective date for SAM auctions to 04/29/19.</p>
March 18, 2019	<p><i>Version 2.8.11</i></p> <p>Added note identifying deprecation of <i>RestatementReason</i> 'Q' = <i>Liquidity</i> on <i>RestatementReason</i> field.</p> <p>Added notes identifying tags supporting AON Orders effective in C1 Feature Pack 6.</p>
March 29, 2019	<p><i>Version 2.9.0</i></p> <p>Removed Bulk Order message types and optional fields.</p> <p>Updated defaults for Cancel on Regulatory Halt port attribute.</p> <p>Replaced all references to BAM with AIM.</p> <p>Added <i>TiedHedge</i> optional field to New Complex Order message.</p> <p>Moved <i>FrequentTraderID</i> to the repeating group of New Order Cross and New Order Cross Multileg messages.</p> <p>Updated GTH trading hours to end at 9:15 a.m. ET.</p> <p>Renamed Late-Limit-On-Open orders to Settlement Liquidity orders.</p>
April 16, 2019	<p><i>Version 2.9.1</i></p> <p>Added clarification setting and using Match Trade Prevention (MTP) with BOE Bulk Quoting Ports and Quote Update messages.</p>

May 2, 2019	<p><i>Version 2.9.2</i></p> <p>Added <i>EquityPartyId</i> to Return Bitfields for Order Acknowledgement, Cross Order Acknowledgement, Order Rejected, Cross Order Rejected, Order Cancelled, Cross Order Cancelled and Order Execution messages.</p> <p>Added <i>EquityPartyId</i> to the Input Bitfields for New Complex Order and New Order Cross Multileg.</p> <p>Added clarification to <i>MassCancelInst</i> behavior when the Clearing Firm Filter is set to 'F'.</p> <p>Updated instructions for handling of <i>LegPositionEffect</i> for complex symbols with an equity leg.</p> <p>Updated GTH and added SessionEligibility field on QuoteUpdate message for C2 and EDGX, effective with C1 Feature Pack 7.</p> <p>Added note indicating reserve orders (<i>MaxFloor</i> greater than 0) will be rejected for Cboe proprietary classes, effective with C1 Feature Pack 7.</p> <p>Updated effective date for SAM auctions to TBD.</p>
May 15, 2019	<p><i>Version 2.9.3</i></p> <p>Added clarification to the Bulk Quote port order acceptance table on page 10.</p> <p>Added <i>PostingInstruction</i> values of 'N' and 'R' on the Quote Update and Quote Update Short messages. Added note indicating Quote Update Acknowledgement and Quote Cancelled messages will be unsequenced effective 07/08/19.</p>
May 31, 2019	<p><i>Version 2.9.4</i></p> <p>Added <i>SubLiquidityIndicator</i> value of "U" for Market Turner on C1.</p> <p>Corrections to New Complex Order example.</p>
June 14, 2019	<p><i>Version 2.9.5</i></p> <p>Added <i>QuoteResult</i> values of a, c, v, and V to Quote Update Acknowledgement message.</p> <p>Corrected corresponding FIX Tag value for <i>EquityTransactTime</i>.</p> <p>Added note indicating New Order Cross Multileg message will be supported on EDGX, effective on EDGX with C1 Feature Pack 8.</p> <p>Added <i>TimeInForce</i> optional field value of '7 = At the Close', effective on BZX, C2, and EDGX with C1 Feature Pack 8.</p>
June 28, 2019	<p><i>Version 2.9.6</i></p> <p>Added notes indicating <i>EquityExDestination</i>, <i>EquityLegShortSell</i>, and <i>EquityPartyID</i> optional fields will be effective on EDGX with C1 Feature Pack 9.</p> <p>Add clarification to Quote Update Acknowledgement messages and Quote Cancelled message regarding messages changing to unsequenced effective 07/08/19.</p>
July 10, 2019	<p><i>Version 2.9.7</i></p> <p>Clarified preferred use of underlying symbol when specifying <i>RiskRoot</i> field.</p> <p>Updated effective date for C-AIM on EDGX to TBD.</p>
July 16, 2019	<p><i>Version 2.9.8</i></p> <p>Clarified statement regarding availability of Quote related messages over ODROP and FIXDROP as Quote Execution messages will be the only Quote related messages available.</p>

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July 31, 2019	<p><i>Version 2.10.0</i></p> <p>Added Add Floor Trade, Add Floor Trade Rejected, Floor Trade Confirmation, Floor Trade Confirmation Rejected, Delete Floor Trade, Delete Floor Trade Rejected and Delete Floor Trade Acknowledgement message types for C1 only.</p> <p>Added <i>TradeThroughAlertType</i> and <i>SenderLocationID</i> optional return bitfields for Order Execution message only for C1 only.</p> <p>Corrected <i>MessageType</i> hexadecimal value to 0x28 in Order Restated message example.</p> <p>Added Enable Floor Trade Notifications and Floor Trade Notification Symbology in the Port Attributes section.</p>
August 9, 2019	<p><i>Version 2.10.1</i></p> <p>Added clarification for <i>OpenClose</i> field in New Order Cross and Add Floor Trade messages for orders with OrderCapacity of M or N.</p> <p>Changed Return Bitfield <i>EquityNBBOProtect</i> to "Reserved".</p> <p>Updated notes for <i>FloorRoutingInst</i> to indicate that when <i>FloorRoutingInst</i> is "D" or "X", <i>RoutingInst</i> must be set to "B" or "R" for simple orders.</p> <p>Updated effective date for C-AIM on EDGX to 8/22/19.</p>
August 23, 2019	<p><i>Version 2.10.2</i></p> <p>Added <i>FloorTraderAcronym</i> as an optional return bit (byte 17) for the Order Execution message.</p> <p>Removed language indicating Cabinet and Sub-cabinet orders can have a <i>TimeInForce</i>(59) value of "GTD" or "IOC" since GTD and IOC orders cannot route to the floor.</p> <p>Updated <i>Order Modified</i> Return Bitfield to indicate Symbol field on second byte can be specified for a message.</p> <p>Clarified <i>ContraBroker</i> and <i>ContraTrader</i> to provide detail about what information will be provided for trades on the Cboe Options trading floor and for complex trades.</p>
August 30, 2019	<p><i>Version 2.10.3</i></p> <p>Removed note indicating a new <i>OrderId</i> will be assigned for an existing quote on a quote update.</p> <p>Added clarification to <i>Crossed Market Cancel/Reject</i> port setting indicating quotes are always accepted, even in a crossed market.</p>
September 5, 2019	<p><i>Version 2.10.4</i></p> <p>Series restricted to closing only will accept opening transactions from both M and N capacities.</p>
September 18, 2019	<p><i>Verstion 2.10.5</i></p> <p>Removed "3=Entire multi-leg instrument package" from <i>MultilegReportingType</i> in Add Floor Trade message as this value is not valid.</p> <p>Added <i>PriceType</i> field to Floor Trade Confirmation, Floor Trade Notification, and Floor Trade Confirmation Rejected.</p> <p>Clarification added for rejects related to an invalid <i>ExecInst</i> value. If a value is supported on one message type, but invalid for another message type, then that will result in a reject.</p> <p>Self imposed risk lockouts will impact ability to send new orders or quotes, but not impact the ability to modify or cancel resting orders or quotes that are still live.</p>
October 2, 2019	<p><i>Version 2.10.6</i></p> <p>Corrected <i>PriceType</i> field example for Floor Trade Confirmation, Floor Trade Notification, and Floor Trade Confirmation Rejected messages.</p>

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October 3, 2019	<p><i>Version 2.10.7</i> Added note indicating Cancel on ME Disconnect port attribute timeout is 15 minutes for C1.</p>
October 15, 2019	<p><i>Version 2.10.8</i> Added values to <i>Side</i> optional field for “5=Sell Short (stock leg only)” and “6=Sell Short Exempt (stock leg only)” <b>(C1 and EDGX only)</b>. Added Market Order NBBO Width Protection, Drill-Through Protection for Limit Orders, and Exchange Default Fat Finger Limits subsections under Protocol Features.</p>
November 7, 2019	<p><i>Version 2.10.9</i> Added notes indicating that the ‘at’ sign, pipe, and double quote characters are not permitted in the <i>CIOrdID</i>, <i>CrossID</i>, and <i>QuoteUpdate</i> fields (effective 01/13/20).</p>
November 12, 2019	<p><i>Version 2.10.10</i> Updated Hours of Operation table, indicating GTH will be sunset on C2 and EDGX effective 11/22/19.</p>
December 3, 2019	<p><i>Version 2.10.11</i> Added notes indicating system will change <i>RoutingInst</i> = ‘Q’ to ‘P’ upon the deprecation of Partial Post Only at Limit. They system will also ignore <i>MaxRemovePct</i>, effective 12/16/19 <b>(BZX only)</b>.</p>
January 14, 2020	<p><i>Version 2.10.12</i> Added note indicating that reason codes are followed by free-form text that may vary from the text listed in the specification, to provide clarification of the reject reason. Added F = Could not reflect to consolidated quote (OPRA) as reason code. Added <i>SendTime</i> as optional input bitfield (byte 2) on the <i>Cancel Order</i> and <i>Purge Order</i> messages (effective 3/31/20).</p>
January 17, 2020	<p><i>Version 2.10.13</i> Added note indicating that EDGX will support SAM and C-SAM auctions, effective 2/3/20.</p>
January 28, 2020	<p><i>Version 2.10.14</i> Added note to the Quote Update section, clarifying that a zero value price and/or size can be used to delete a quote. Updated description of <i>SendTime</i> field in <i>Quote Update</i> message and List of Optional Fields table.</p>
January 30, 2020	<p><i>Version 2.10.15</i> Added note indicating <i>RoutingFirmID</i> will be effective on BZX effective 3/2/20.</p>
February 3, 2020	<p><i>Version 2.10.16</i> Added <i>ExecLegCFICode</i> as an optional return bit (byte 17) for the <i>Order Execution</i> message. Effective on C1, C2, and EDGX 2/19/20.</p>
March 10, 2020	<p><i>Version 2.10.17</i> Updated Return Bitfield tables with bytes 16 and 17. Updated <i>LegRatioQty</i> for New Complex Instrument and Complex Instrument Accepted messages to support increase of maximum leg quantity and maximum package price for complex orders (effective on C1, C2, and EDGX 04/13/20).</p>

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March 27, 2020	<i>Version 2.10.18</i> Updated Quotes Reason Codes for 'n' and 'x' (effective on 03/19/20 for EDGX, 03/20/20 for C2 and BZX, and 03/23/20 for C1). Added notes indicating Quote Update messages entered via a BOE Bulk Quoting port will only be supported for Market Makers (capacity = 'M') and a valid, non-zero value for the <i>SendTime</i> refiled for any Quote Update messages (effective 4/24/20). Made a small correction in the Complex Instrument Accepted message example.
April 22, 2020	<i>Version 2.10.19</i> Updated Quote Reason Code 't'. Updated the AutoMatchPrice description for more clarity. Effective date updated to 7/10/20 for BOE Bulk Quoting port support restriction to Market Makers and requirement for non-zero <i>SendTime</i> value.
April 27, 2020	<i>Version 2.10.20</i> Noted Notional Exposure Tracking to be deprecated on 5/8/20.
April 28, 2020	<i>Version 2.10.21</i> Added note indicating the rate limit at which identical Mass Cancel and Purge Order messages will be accepted will be changed from 20 to 10 messages per second per port (effective 5/27/20). Clarified description of Capacity value 'N' from "Non-Cboe Market Maker" to "Away Market Maker".
May 22, 2020	<i>Version 2.11.0</i> Added Maximum Open Order Limits section. Updated <i>ContraBroker</i> field values in Example Order Execution Message. Updated New Order Cross message table. Added note indicating the rate limit at which identical Risk Reset messages will be accepted will be changed from 1 per second to 1 per 100 ms per port (effective 5/27/20). Added new <i>Subreason</i> and <i>CancelSubreason</i> fields to better inform members on the reason why an order was cancelled or rejected. Also added newe <i>RiskReset</i> values to allow for rest or self-imposed lockout without resetting risk counters (effective 8/3/20).
July 7, 2020	<i>Version 2.11.1</i> Added <i>EquityExDestination</i> (22016) value of 'P' for Penserra (effective 8/10/20). Added <i>CrossInitiator</i> (22026) field in New Order Cross Multileg and New Order Multileg messages (C1 and EDGX Only) (effective 8/10/20). Updated and removed values from <i>SubreasonText</i> (22058) and <i>RiskReset</i> (7692).
July 8, 2020	<i>Version 2.11.2</i> Added date for deprecation of <i>MassCancel</i> and <i>MassCancelLockout</i> messages (effective 10/12/20).
July 28, 2020	<i>Version 2.11.3</i> Clarified <i>SubLiquidityIndicator</i> value of 'B' = Step Up Mechanism (C1 and EDGX Only). Updated Drill-Through Amount table and default values for <i>DrillThruProtection</i> (effective 08/05/20).
August 5, 2020	<i>Version 2.11.4</i> Updated Return Bitfield tables for Order Rejected, Order Canceled, and Cancel Rejected messages to indicate <i>ClearingOptionalData</i> is an optional field (effective 08/28/20). Corrected SubLiquidityIndicator value for QCC from 'q' to 'Q'.

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August 20, 2020	<i>Version 2.11.5</i> Added new Purge Notification message and Acknowledgement Style value of "A" for second character of <i>MassCancelInst</i> optional field (effective 9/25/20).
September 23, 2020	<i>Version 2.11.6</i> Added Purge Notification to return bitfields section. No optional fields may be selected for Purge Notification but fields may be added over time. Updated note for Order Execution message, adding C1 as applicable platform for complex orders.
September 28, 2020	<i>Version 2.11.7</i> Added <i>EquityExDestination</i> (22016) values of 'F','L', and 'S' (effective 10/7/20).
October 6, 2020	<i>Version 2.11.8</i> Added CrossType value of '4 = Position Compression Cross ("PCC") on New Order Cross and New Order Cross Multileg messages (C1 Only) (effective 10/28/20 10/29/20). Updated description of <i>MassCancelLockout</i> field in Purge Notification message to indicate 'Y' = lockout or 'N' =no lockout.
October 14, 2020	<i>Version 2.11.9</i> Added note indicating Complex PCC orders cannot be composed of both SPX and SPXW in the same instrument. Added <i>SubLiquidityIndicator</i> value of 'P = PCC' (C1 Only) (effective 10/28/20- 10/29/20). Updated drill-through procedures to be iterative (effective 11/9/20 on EDGX and 11/10/20 on BZX, C1, and C2)
October 29, 2020	<i>Version 2.11.10</i> Added note to description of <i>Capacity</i> optional field indicating the <i>Capacity</i> field must be set to M for all Quote Update messages. Updated description of <i>CrossType</i> in List of Optional Fields to include '4'=PCC ((C1 Only) and added note to <i>Compression</i> description to indicate when <i>CrossType</i> = '4' <i>Compression</i> field should not be specified (effective 10/28/20- 10/29/20). Updated the Floor Trade Notification message due to a typo in the offset of the <i>MaturityDate</i> field and all fields that come after it in the message. Added <i>SendTime</i> as required field for Cancel Order and Purge Order messages (effective 01/29/21).
November 2, 2020	<i>Version 2.11.11</i> Corrected Cancel Order message description and updated examples. Corrected Purge Order message description by adding <i>Reserved</i> field in place of deprecated <i>MassCancelInst</i> and updated example.
November 5, 2020	<i>Version 2.11.12</i> Updated iterative drill-through procedures effective date (effective 11/16/20 on EDGX and 11/17/20 on BZX, C1, and C2)
December 17, 2020	<i>Version 2.11.13</i> Added CrossType value of '5 = Related Futures Cross ("RFC") on New Order Cross Multileg message (C1 Only) (effective 01/19/21). Added <i>SubLiquidityIndicator</i> value of "F = RFC" (C1 Only) (effective 01/19/21). Added note to <i>ClearingAccount</i> field indicating when <i>Capacity</i> is set to "M" for Market-Maker, any unregistered accounts in this field will cause the quote or order to be rejected with a reason code of "A" and sub-reason code "L". Added new subreason code, L = Unregistered MM Account (effective 02/08/21).

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January 14, 2021	<p><i>Version 2.11.14</i></p> <p>Clarified description of 2<sup>nd</sup> character (Acknowledgement Style) value "M" for <i>MassCancelInst</i> field.</p> <p>Clarified that invalid EFID values specified in <i>OnBehalfOfCompld</i> will result in rejects of <i>MassCancelInst</i> or Purge Requests.</p> <p>Added notes to <i>QuoteUpdate</i> message and <i>ClearingAccount</i> field indicating when <i>Capacity</i> is set to "M" for Market-Maker, any unregistered accounts in this field will cause the quote sent via the Quoting Interface to be rejected with a reason code of "C" (effective 02/08/21).</p>
February 3, 2021	<p><i>Version 2.11.15</i></p> <p>Updated effective date for changes to <i>QuoteUpdate</i> message and <i>ClearingAccount</i> field indicating when <i>Capacity</i> is set to "M" for Market-Maker, any unregistered accounts in this field will cause the quote sent via the Quoting Interface to be rejected with a reason code of "C" (effective 03/01/21).</p>
February 10, 2021	<p><i>Version 2.11.16</i></p> <p>Added Section 1.6.1 – Architecture to provide high level overview of protocol architecture and source IP blocking feature.</p> <p>Added Section 1.6.12 - Stale NBBO to describe system behavior when SIP NBBO is unavailable.</p> <p>Added "Forced Open Cancel Instruction" to Port Attributes table (effective 3/12/21 for EDGX, 3/15/21 for BZX, C1, C2).</p>
February 22, 2021	<p><i>Version 2.11.17</i></p> <p>Added "EFID Filter for Purge Ports" to Port Attributes table (effective 3/17/21).</p>
March 25, 2021	<p><i>Version 2.11.18</i></p> <p>Section 1.6.12 (Floor Routing) – Corrected list of example conditions which cause default routing to theFloor.</p> <p>Added Curb session hours (effective 04/25/22 TBD 02/07/22 TBD 09/27/21 Q3 2021).</p> <p>Added new section 1.3.1 on holiday sessions (effective 11/21/21 Q4 2021).</p> <p>Added new section 1.6.5 on cancellation of carried orders between trading sessions (effective 04/25/22 TBD 02/07/22 TBD 09/27/21 Q3 2021).</p> <p>Updated description of SessionEligibility message (effective 01/24/22 TBD 09/27/21 Q3 2021).</p> <p>Updated 4.1.10 on risk reset between GTH and Curb session (effective 04/25/22 TBD 02/07/22 TBD 09/27/21 Q3 2021).</p>
April 5, 2021	<p><i>Version 2.11.19</i></p> <p>Added note indicating Fat Finger checks are not applicable for any floor-based Multi-Class Spread limit orders(effective 04/20/21).</p>
April 15, 2021	<p><i>Version 2.11.20</i></p> <p>Updated section 4.1.7 to clarify quote cancellation behavior when a trading day spans multiple calendar days.</p>
May 13, 2021	<p><i>Version 2.11.21</i></p> <p>Updated Curb session related effective dates to 01/24/22 TBD 09/27/21.</p>
June 08, 2021	<p><i>Version 2.11.22</i></p> <p>Updated <i>CumQty</i> Section for C1 Floor Specific Handling.</p> <p>Removed <i>FrequentTraderID</i> from <i>Modify Order</i> message as this functionality is not being used on the <i>Modify Order</i> message.</p> <p>Added new optional field <i>LegPositionEffectsExt</i> to accommodate maximum of 16 legs allowed on complex orders (effective 08/25/21 08/09/21).</p>

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June 15, 2021	<i>Version 2.11.23</i> Updated effective date for extended GTH session to 11/21/21.
August 2, 2021	<i>Version 2.11.24</i> Updated Modify Order Input Bitfield table to indicate that <i>FrequentTradeID</i> cannot be requested for the Modify Order message. Updated effective date for optional field <i>LegPositionEffectsExt</i> to accommodate maximum of 16 legs on complex orders (effective 08/25/21).
August 24, 2021	<i>Version 2.11.25</i> Updated sections 4.1.7 (Quote Update) and 1.6.6 (Display Indicator Features) to note that quotes will be accepted if priced through the NBBO within a configurable buffer (effective 09/15/2021).
August 25, 2021	<i>Version 2.11.26</i> Updated Curb session effective date to 01/24/22 <del>TBD</del> .
September 9, 2021	<i>Version 2.11.27</i> Added new value of "B" (RTH+Curb) for <i>SessionEligibility</i> message (effective 01/24/22 <del>TBD</del> ).
September 28, 2021	<i>Version 2.11.28</i> Added new "I" value to <i>MassCancelInst</i> , indicating multi-unit cancel acknowledgments; added new <i>SourceMatchingUnit</i> field to Mass Cancel Acknowledgement. (effective 11/15/21). Added <i>TradeDate</i> to list of Optional Fields and added note indicating <i>TradeDate</i> will be available on the Order Execution message (effective 11/21/21).
October 15, 2021	<i>Version 2.11.29</i> Added 'I' value to <i>PostingInstruction</i> on Quote Update and Quote Update Short messages (Effective 12/10/21 for EDGX and 12/12/21 for BZX/C1/C2).
October 21, 2021	<i>Version 2.11.30</i> Added new subreason code 'S = Minimum size requirement not met' (effective 11/28/21).
November 4, 2021	<i>Version 2.11.31</i> Updated Curb session effective date to 04/25/22 <del>TBD</del> 02/07/22. Updated Hour of Operation to eliminate Sunday 7:15 p.m. GTH Order Acceptance time. Updated Holiday Session Figure 1. Updated effective date for new <i>SessionEligibility</i> message value of "B" (RTH+Curb) to 01/24/22. Added clarification to description of <i>MassCancelInst</i> value 'I' to indicate that message type must be Purge Orders; Mass Cancel.
November 12, 2021	<i>Version 2.11.32</i> Added new optional <i>Held</i> field that will be available on New Order, New Order Complex, and Execution Report messages (C1 Only) (effective 12/12/21).
December 1, 2021	<i>Version 2.11.33</i> Added note to section 1.6.6 indicating certain functionality is BZX only. Corrected reference to FIX Tag 439 (ClearingFirm). Added clarifying note to section 1.6.7.5 to indicate that Quotes that <u>cross</u> the NBBO or displayed Cboe book will be accepted if within a configurable buffer. Added 'I = IOC Quote Accepted' to <i>QuoteResult</i> field.

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December 3, 2021	<i>Version 2.11.34</i> Clarified description of optional <i>Held</i> field to indicate default value of 'N' applies when an order is directed to a Non-PAR Official (C1 Only) (effective 12/12/21).
December 16, 2021	<i>Version 2.11.35</i> A Logout message will also be sent for any ports that are connected when the Options Exchanges shut down (effective 01/09/22).
January 13, 2022	<i>Version 2.11.36</i> Updated US Holiday Trading Hours graphic. Noted that CAT reporting requirements mandate that <i>QuoteUpdateID</i> is unique for each Quote Update message sent to the Exchange. Added a new <i>MatchingUnit</i> field to Optional Fields and Purge Order Bitfield (effective 02/11/22 for EDGX and 02/14/22 for C1, C2, and BZX). Updated Purge Orders section indicating that <i>CustomGroupID</i> or <i>EFID</i> ( <i>ClearingFirm</i> ) purges with no <i>RiskRoot</i> may be directed to a specific matching unit using the <i>MatchingUnit</i> optional field (effective 02/11/22 for EDGX and 02/14/22 for C1, C2, and BZX).
January 21, 2022	<i>Version 2.11.37</i> Duplicative Order Protection Time Threshold to be sunset (effective 02/27/22). Duplicative Order Protection Order Count will look at consecutive orders (effective 02/27/22).
February 1, 2022	<i>Version 2.11.38</i> Updated Curb session effective date to 04/25/22 TBD.
February 22, 2022	<i>Version 2.11.39</i> Added a new section 1.6.7.3 to detail Stop or Stop Limit Orders Drill-Through Handling (TBD effective 03/28/22). Noted that if both sides of a complex/spread trade are on the same order entry session, Cboe does not guarantee that the leg executions will not be interleaved between sides.
March 7, 2022	<i>Version 2.11.40</i> <i>MaxRemovePct</i> field to be sunset on BZX (effective 05/06/22), C1 (effective 05/08/22), and C2/EDGX (effective 05/09/22).
March 14, 2022	<i>Version 2.11.41</i> Changed effective date for updated Stop/Stop Limit Drill-Through Handling to TBD.
April 4, 2022	<i>Version 2.11.42</i> Updated Curb session effective date to 04/25/22.
November 7, 2022	<i>Version 2.11.43</i> Updated <i>OrdType</i> = 1 (Market) to indicate market and stop orders are not supported during GTH or Curb sessions. The maximum allowed message rate is 1 msg/sec for test products. The length of <i>LoginResponse</i> will vary depending on acceptance or rejection of the <i>LoginRequest</i> . Added XSP to GTH and Curb sessions (effective 12/11/22).
November 30, 2022	<i>Version 2.11.44</i> Stop/Stop Limit orders will only elect based off of RTH quotes and trades (effective 12/18/22).
January 24, 2023	<i>Version 2.11.45</i> Updated Architecture and Message in Flight Settings section (BZX only) (effective 03/24/23).

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February 27, 2023	<p><i>Version 2.11.46</i></p> <p>Updated <i>OpenClose</i> to indicate if the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' or 'N' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B', or the order has a <i>RoutingInst</i> = 'P'. Updated <i>LegPositionEffect</i>, <i>LegPositionEffects</i> and <i>LegPositionEffectsExt</i> to indicate if the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' or 'N' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B'.</p>
March 29, 2023	<p><i>Version 2.11.47</i></p> <p>An Open position cannot trade with an Open position for series limited to Closing Only transactions, even if the inbound IOC from the aggressing market maker is sent with that combination of tags.</p>
April 17, 2023	<p><i>Version 2.11.48</i></p> <p>Added effective dates to Architecture and Message in Flight Settings section (effective 04/28/23 on EDGX, 05/12/23 on C2, and 5/29/23 on C1).</p>
May 2, 2023	<p><i>Version 2.11.49</i></p> <p>Updated Bulk Quoting Port Quote/Order Behavior Matrix section.</p>
May 15, 2023	<p><i>Version 2.11.50</i></p> <p>Added <i>TargetMatchingUnit</i> to the Reset Risk message (effective 06/12/23).</p>
June 13, 2023	<p><i>Version 2.11.51</i></p> <p>Updated sections 1.6.7.2 and 1.6.7.3 to include drill-through handling enhancements (effective 08/07/23 07/17/23 on C1).</p>
June 15, 2023	<p><i>Version 2.11.52</i></p> <p>Updated priority treatment of no-change quotes, added new <i>QuoteResult</i> value of 'O' (Unknown quote), and noted modifications to quotes or orders will result in the same time priority behavior (effective 10/25/23 08/16/23 on C2, and 10/30/23 08/21/23 on BZX, C1, and EDGX).</p>
July 20, 2023	<p><i>Version 2.11.53</i></p> <p>Added <i>RiskResetResult</i> = 'M' (invalid matching unit). Updated <i>OpenClose</i> to indicate if the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B', or the order has a <i>RoutingInst</i> = 'P'. Updated <i>LegPositionEffect</i>, <i>LegPositionEffects</i> and <i>LegPositionEffectsExt</i> to indicate if the leg is limited to closing only transactions, only <i>Capacity</i> = 'M' will be permitted to submit <i>OpenClose</i> = 'O' if the order has <i>TimeInForce</i> = '3' (IOC) and <i>RoutingInst</i> = 'B'</p>
July 28, 2023	<p><i>Version 2.11.54</i></p> <p>Clarified that <i>Price</i> is optional on <i>Modify Order</i> requests for market orders. Added new <i>ExDestination</i> value of 'M' (MEMX) and added new <i>ContraBroker</i> value of 'MEMX' (effective 08/07/23). Updated effective dates for priority treatment of no-change quotes, new <i>QuoteResult</i> value of 'O' (Unknown quote), and modifications to quotes or orders that will result in the same time priority behavior (effective 10/25/23 on C2, and 10/30/23 on BZX, C1, and EDGX).</p>
August 4, 2023	<p><i>Version 2.11.55</i></p> <p>Updated effective dates for drill-through handling enhancements on C1, and updated drill-through parameter ranges (effective 08/07/23). Updated <i>Purge Orders</i> to indicate that <i>MassCancelInst</i> must be populated and <i>ClearingFirm</i> is only required if a list of configured/allow EFIDs has not been configured on the session.</p>

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August 15, 2023	<i>Version 2.11.56</i> Updated effective date for drill-through handling enhancements on C2, BZX, and EDGX (effective 08/25/23).
August 22, 2023	<i>Version 2.11.57</i> <i>TransactionTime</i> in Mass Cancel Acknowledgement messages will indicate the time the event occurred in the Cboe Matching Engine (effective 09/05/23).
October 30, 2023	<i>Version 2.11.58</i> Updated the identical Purge message definition to include <i>MatchingUnit</i> (effective 11/13/23).
December 18, 2023	<i>Version 2.11.59</i> Clarified that if <i>OrderCapacity</i> is not set to "M" or "N" and <i>ClearingAccount</i> is populated, the order will be (by default) rejected on C1 and C2 and accepted on BZX and EDGX Only. Updated <i>TradeTime</i> to <i>FloorTradeTime</i> . Added new return bitfield, <i>FloorTradeTime</i> , which will be available as byte 19, bit 1 of the Order Execution message (C1 only) (effective 01/16/24).
January 10, 2024	<i>Version 2.11.60</i> Clarified that the "Default <i>EquityPartyID</i> " port attribute is applicable to C1 and EDGX only. Added a new "Default <i>EquityExDestination</i> " port attribute (effective 04/29/24 03/11/24).
February 2, 2024	<i>Version 2.11.61</i> Updated section 1.6 to include latency expectations as well as Members/TPH's responsibility to monitor the status of the messages they send to the exchange.
February 12, 2024	<i>Version 2.11.62</i> Added new return bitfield, <i>EquityExDestination</i> , which will be available as byte 19, bit 2 of the Order Execution message (C1 and EDGX only) (effective 04/29/24 03/11/24).
March 8, 2024	<i>Version 2.11.62</i> Clarified the <i>CrossInitiator</i> (C1 and EDGX only) description to indicate that the MPID field is required on orders routed to destinations via NYSE Chicago using <i>EquityExDestination</i> (22016). Updated <i>EquityExDestination</i> port attribute and bitfield effective date to 04/29/24.
April 22, 2024	<i>Version 2.11.63</i> Clarified <i>Account</i> (1) accepts all characters in ASCII range 33-126. Noted a maximum of 1,295 Modify Order requests may be made to a single order each trading day.
June 21, 2024	<i>Version 2.11.64</i> Clarified that <i>RiskResetResult</i> value '<space>' = Ignored; exceeds 1 reset per 100 milliseconds' in Reset Risk Ackowlegement messages. Added <i>ExDestination</i> (100) = 'w' (MIAX Sapphire) and <i>ContraBroker</i> (375) = 'SPHR'.
July 1, 2024	<i>Version 2.11.65</i> Added <i>CrossOnBehalfOfID</i> (FIX Tag 22028) to New Complex Order and New Order Cross Multileg (C1 and EDGX only) (effective 07/22/24).
July 22, 2024	<i>Version 2.11.66</i> Added new Section 1.2 – Certification Requirement. Effective 08/26/24, GTH will be extended until 9:25 a.m. ET (C1 only).
August 28, 2024	<i>Version 2.11.67</i> Updated drill-through amounts (effective 09/16/24).

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September 3, 2024

*Version 2.11.68*

Removed pending drill-through changes.

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