Cboe Europe

Auction Feed Specification

Version 1.2
31 May 2019

Contents

1 Introduction

1.1 Overview

This document describes the Cboe Auction Feed (hereafter, CAF) protocol. The intended audience of this document is software developers of Cboe participants who would like to use the protocol to receive Opening, Closing and Periodic Auction information. The CAF disseminates Cboe Auction price and size information:

- between 07:50 and 08:00[1] for the Opening auction every five seconds.

- between 16:30 and 16:35[2] for the Closing auction every five seconds.

- between 08:00 and 16:30 for Periodic auctions.

1.2 Feed Connectivity Requirements

Given the defined intervals and the limited amount of messaging required at this time, there is no minimum bandwidth requirement for the CAF.

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[1]the end time for Opening auction is randomised
[2]the end time for Closing auction is randomised

2 Protocol

The CAF disseminates Cboe Auction information. The CAF cannot be used to enter orders. For order entry, refer to the Cboe FIX Specification or BOE2 Specification.

All information presented on the CAF is anonymous and does not contain any member identifying information.

2.1 Message Format

The CAF is comprised of a series of fixed-length sequenced messages. The length of each message is dependent upon the message type. Each message is made up of non-control ASCII bytes. Members familiar with the TCP PITCH protocol should find it very easy to reuse that code to process the CAF.

2.2 Sequence Numbers

The messages that make up the CAF protocol are delivered using SOUP 2.0, which handles sequencing and delivery integrity. The Cboe implementation of SOUP 2.0 is the same as other market centres. This includes the implementation of session events, such as login requests, client/server heartbeats, and logout requests.

3 Auction Feed Messages

The fields within each message type have a corresponding data type. The various data types are defined in the following table.

Data Type	Description
Alpha	A string of ASCII letters (A–Z), left justified and space padded on the right.
Alphanumeric	A string of ASCII numbers and letters (A–Z, 0–9), left justified and space padded on the right.
Numeric	A string of ASCII numbers (0–9), right justified and zero filled on the left.
Long Price	A string of ASCII numbers (0–9) consisting of twelve whole digits followed by seven decimal digits. The whole number portion is zero filled on the left; the decimal portion is zero filled on the right. The decimal point is implied by position and does not explicitly appear in the field.
Timestamp	A string of ASCII numbers (0–9) representing the whole number of milliseconds past midnight London time, right justified and zero padded on the left, with no decimal point.

3.1 System Event Message

Unlike other market centres, Cboe does not send System Event messages.

3.2 Auction Update Message

Auction Update messages are used to disseminate indicative price and size information during auctions for Cboe auction eligible securities. For Opening and Closing auctions, Auction Update messages are published periodically during the call and extension phases of the auction process. For Periodic auctions, they are published when there is material change.

Field Name	Offset	Length	Value	Description
Timestamp	0	8	Timestamp	Timestamp
Message Type	8	1	"I"	Auction Update Message
Symbol	9	8	Alphanumeric	Symbol right padded with spaces.
Auction Type	17	1	Alpha	"O" = Opening Auction "C" = Closing Auction "H" = Halt Auction[3] "V" = Volatility Auction[3] "P" = Periodic Auction "U" = Cboe Closing Cross
Reference Price	18	19	Long Price	Reference price used in tie-breaker situations
Indicative Price	37	19	Long Price	Price at which the auction would match if executed at the time of the message
Indicative Shares	56	10	Numeric	Number of shares at the Indicative Price
Outside Tolerance	66	1	Alphanumeric	Indicates whether the price on this update is outside the Cboe EBBO collar: "O" = Outside tolerance "I" = Inside tolerance "-" = Not specified

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[3]Reserved for future use

Includes Primary	67	1	Alphanumeric	Indicates whether the Cboe EBBO used to collar this update includes the Primary Market quotes: "P" = Includes Primary "N" = Excludes Primary "-" = Not specified

3.3 Auction Summary

Auction Summary messages are used to disseminate the results of an auction in a Cboe auction eligible security.

Field Name	Offset	Length	Value	Description
Timestamp	0	8	Timestamp	Timestamp
Message Type	8	1	"j"	Auction Summary Message
Symbol	9	8	Alphanumeric	Symbol right padded with spaces.
Auction Type	17	1	Alpha	"O" = Opening Auction "C" = Closing Auction "H" = Halt Auction[4] "V" = Volatility Auction[4] "P" = Periodic Auction "U" = Cboe Closing Cross
Price	18	19	Long Price	Auction price
Shares	37	10	Numeric	Cumulative number of shares executed during the auction

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[4]Reserved for future use

4 Support

Please email support questions or comments regarding this specification to tradedeskeurope@cboe.com.

Revision History

16 December 2015	Version 1.0
	Initial draft version.
19 February 2016	Version 1.1
	Updated for new branding.
31 May 2019	Version 1.2
	Added Cboe Closing Cross.