

NASDAQ OMX[®] | NASDAQ FUTURES

FIX Protocol

Version 1.3

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NASDAQ FUTURES FIX System

Version 1.2

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1. Introduction to NASDAQ FUTURES FIX System

Overview

This document defines NASDAQ Futures implementation of the Financial Information Exchange (FIX) 4.2 protocols for the NASDAQ Futures trading system.

Users

It is assumed that the user of this manual is familiar with the FIX 4.2 protocol standard, (can be found at www.fixprotocol.org).

2. Session Information

The first message should be a logon message. No additional messages should be transmitted until NASDAQ Futures has verified the SenderCompID, and a logon is received from NASDAQ Futures.

Note: NASDAQ Futures does NOT support encryption.

ID Fields

| | |
|-----------------------|--|
| SenderCompID sent | The SenderCompID as assigned by NASDAQ Futures. The maximum size is 4 to 6 characters. |
| SenderCompID returned | The SenderCompID returned within all messages is NQFX. |
| TargetCompID | Your TargetCompID should always be NQFX. |

3. Cancel and Replace – Order Modification

When replacing an order the ClOrdID field must be a unique ID for the newest order in the chain of orders and the OrigClOrdID must contain the ClOrdID of the order you are trying to replace / modify.

When canceling an order the ClOrdID field must be a unique ID for the cancel request and the OrigClOrdID must contain the ClOrdID of the order you are trying to cancel.

Only Price,OrdQty,tif, order type, Account ID and AllocAccount may be changed for orders.

Any change will result in your order losing time priority with the exception of a reduction in OrdQty only.

4. FIX Message Types – Supported / Unsupported

FIX Messages - Supported by NASDAQ Futures

Administrative Messages

Standard FIX administrative messages are supported.

Incoming Messages

New Order - Single
Order Cancel Request
Order Cancel/Replace Request (a.k.a. Order Modification Request)
OrderMassCancelRequest
Participant Trade

Outgoing Messages

Execution Report
Order Cancel Reject
OrderMassCancelReport
PreTradeRiskNotification

5. Session Protocol Messages

All NASDAQ Futures comments/additions to the FIX specification are listed in BOLD in the "Comments" column for each message type.

If a Tag is not explicitly supported by NASDAQ Futures it will be ignored. Your message will not be rejected.

Message Header

| Tag | Field Name | Req'd | Comments |
|-----|-----------------|-------|--|
| 8 | BeginString | Y | FIX.4.2. Must be the first field in message. |
| 9 | BodyLength | Y | Must be second field in the message. |
| 35 | MsgType | Y | Must be the third field in the message. |
| 34 | MsgSeqNum | Y | |
| 49 | SenderCompID | Y | SenderCompID as assigned by NASDAQ Futures. It will always be four to six characters. |
| 56 | TargetCompID | Y | "NQFX" |
| 52 | SendingTime | Y | |
| 50 | SenderSubID | N | Ignored |
| 57 | TargetSubID | N | Ignored |
| 43 | PossDupFlag | N | Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request. |
| 97 | PossResend | N | Required when message may be duplicate of another message sent under a different sequence number. |
| 122 | OrigSendingTime | N | Required for message resends. If data is not available set to same value as SendingTime. |

Logon Message

| Tag | Field Name | Req'd | Comments |
|-----|-------------------------|----------|--------------------|
| | Standard Header | Y | MsgType = A |
| 98 | EncryptMethod | N | Not supported |
| 108 | HeartBtInt | Y | |
| 141 | ResetSeqNumFlag | N | Not supported |
| 95 | RawDataLength | N | Not supported |
| 96 | RawData | N | Not supported |
| | Standard Trailer | Y | |

6. Application Messages Regarding Orders

All NASDAQ Futures comments/additions to the FIX specification are listed in **BOLD** in the "Comments" column for each message type.

If a Tag is not supported by NASDAQ Futures "Not supported" will appear in the "Comments" column. If you send an unsupported tag, the tag and corresponding data will be ignored. Your message will not be rejected.

New Order – Single Message

Firms who wish to electronically submit securities orders to NASDAQ Futures for execution use the new order message type.

Orders can be submitted with special handling instructions and execution instructions.

Handling instructions refer to how NASDAQ Futures should handle the order in its trading system. The HandlInst field is optional and if provided, it should always be set to 1, which indicates Automated execution order, private, no Broker intervention.

New Order messages received with a duplicate ClOrdID will be ignored, regardless if the PossResend flag is set. The New Order Message is described in the following table:

| Tag | Field Name | Req'd | Comments |
|-----|------------------------|----------|--|
| | Standard Header | Y | MsgType = D |
| 11 | ClOrdID | Y | Unique identifier of the order as assigned by firm. Must be 30 characters or less. |
| 21 | HandlInst | N | If provided, must be set to 1 = Automated execution order, private, no Broker intervention |
| 55 | Symbol | Y | 1 – 6 character Options Root/Futures Symbol. Spaces, periods, commas not allowed. |
| 54 | Side | Y | Side of order. Valid values: 1 = Buy 2 = Sell |
| 38 | OrderQty | Y | Required. Acceptable range is 1 to 999999 however, the max may be lower as it is based on port and Pre Trade Risk settings. No commas, decimals, negative numbers or spaces allowed. |
| 40 | OrdType | Y | Valid values: 1 = Market 2 = Limit |
| 44 | Price | N | Price field is required for Limit Orders. The price can have up to 10 whole numbers and a precision of up to 8 decimals. |
| 109 | ClientID | N | Used for firm identification. The firm identifier must be a valid mnemonic assigned by the exchange and the firm must be an approved member of the exchange. If this field is not provided by the firm, the default mnemonic associated with the FIX port will be used. |
| 76 | ExecBroker | N | Special handling instruction for the order. See table below for descriptions. Valid values: POST WAIT |

| | | | |
|------|--------------------|---|--|
| 1 | Account | Y | Must be 10 characters or less. |
| 18 | ExecInst | N | If provided, can contain only one instruction. G = All Or None (AON) - AON orders with a TIF other than IOC will be treated as IOC. |
| 110 | MinQty | N | If MinQty is specified, the TIF should be IOC(tag 59=3). If any other TIF is specified, it will be treated as IOC. |
| 59 | TimeInForce | N | Specifies how long the order remains in effect. Absence of this field is interpreted as Immediate or Cancel. Valid values: 0 = Market Hours (DAY) 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill Or Kill |
| 47 | OCCClearingAccount | | Required if ParticipantCode (Tag 6299) is not provided. This is the OCC clearing account type. Please refer to NASDAQ Futures Rules and section 9 below for more information C = customer order F = firm order M = NASDAQ Futures registered market maker order |
| 58 | Text | N | Firms can use this field in the order message to supply optional clearing information that is sent to OCC as supplementary data. If field is supplied, NASDAQ Futures will allow only 13 characters. |
| 77 | OpenClose | Y | O = opening position C = closing position |
| 167 | SecurityType | Y | Valid values: Futures = 'FUT' Options = 'OPT' |
| 541 | MaturityDate | Y | Month, Day and Year of the maturity. Format YYYYMMDD (e.g., 20150918 to represent Sept 18, 2015) |
| 201 | PutOrCall | N | 0 = put 1 = call Required for 'SecurityType' = OPT' |
| 202 | StrikePrice | N | Strike Price for option: Valid values: 0 – 999999.99999999 Required for 'SecurityType' = OPT' |
| 440 | ClearingAccount | N | Up to 5-character alphanumeric. If tag is not supplied, spaces will be used. This field is passed through to the OCC sub-account/multi-account field. Note: NASDAQ Futures will forward only left most 4 characters to OCC. |
| 439 | ClearingFirm | N | CMTA Number (firm that will clear the trade) upto 5-character numeric. If tag not supplied, this order will not be a CMTA. |
| 79 | AllocAccount | N | Exchange Internal Firm Identifier of the Directed Participant for Directed Order Flow; should not exceed 4 characters. |
| 6299 | ParticipantCode | N | The internal Participant Code. Please refer to NASDAQ Futures Rules and section 9 below for more information Valid values: A,B,C,D,E,F,G,H,I |

| | | | |
|------|-------------------------|----------|--|
| 582 | CustOrderCapacity | N | Required if ParticipantCode (Tag 6299) is not provided. This is Customer Type Indicator (CTI) code. Please refer to NASDAQ Futures Rules and section 9 below for more information Valid values: 1, 2, 3, 4 |
| 5256 | AccountOriginType | N | Required if ParticipantCode (Tag 6299) is not provided. Segregated or non-segregated origin types. Please refer to NASDAQ Futures Rules and section 9 below for more information Valid values: 1, 2 |
| 6606 | TraderID | Y | Trader ID Maximum length = 8 |
| | Standard Trailer | Y | |

| NASDAQ Futures Special Handling Instructions (Tag 76 – Exec Broker) | |
|--|--|
| Valid Tag 76 Values | Description |
| POST | Post Only |
| WAIT | Delayed order submission to the match engine based on NASDAQ Futures order exposure rules. |

Order Cancel Request Message

The Order Cancel Request Message requests the cancellation of all remaining quantity of an existing order. The request will only be accepted if the order can successfully be pulled back from the exchange trading system without executing.

Do not use this message to partially cancel (reduce) an order. The **Order Cancel/Replace Request** should be used to partially cancel (reduce) an order.

A cancel request is assigned a ClOrdID by the firm and is treated as a separate entity. If rejected, the ClOrdID of the cancel request will be sent in the Cancel Reject message, as well as the ClOrdID of the actual order in the OrigClOrdID field. The ClOrdID assigned to the cancel request must be unique amongst the ClOrdID assigned to regular orders and replacement orders.

The format of the cancel request message is shown in the following table:

| Tag | Field Name | Req'd | Comments |
|-----|-------------------------|----------|--|
| | Standard Header | Y | MsgType = F |
| 41 | OrigClOrdID | Y | ClOrdID of the original order to cancel, as assigned by the originating participant (Firm). Must be 30 characters or less. |
| 11 | ClOrdID | Y | Unique ID of cancel request as assigned by the firm. Must be 30 characters or less. |
| 55 | Symbol | Y | 1 – 6 character Options Root/Futures Symbol. Spaces, periods, commas not allowed. |
| 54 | Side | Y | Side of order - Valid values: 1 = Buy 2 = Sell |
| 38 | OrderQty | Y | OrderQty to be cancelled. |
| 37 | OrderID | N | Unique identifier of most recent order as assigned by NASDAQ Futures. |
| 109 | ClientID | N | Used for firm identification. The firm identifier must be a valid mnemonic assigned by the exchange and the firm must be an approved member of the exchange. If this field is not provided by the firm, the default mnemonic associated with the FIX port will be used. |
| 167 | SecurityType | Y | Valid Values: Futures = 'FUT' Options = 'OPT' |
| 541 | MaturityDate | Y | Month, Day and Year of the maturity. Format YYYYMMDD (e.g., 20150918 to represent Sept 18, 2015) |
| 201 | PutOrCall | N | 0 = put 1 = call Required for 'SecurityType' = OPT' |
| 202 | StrikePrice | N | Strike Price for option: Valid values: 0 – 99999999.9999 Required for 'SecurityType' = OPT' |
| | Standard Trailer | Y | |

Order Cancel/Replace Request (a.k.a. Order Modification Request)

The Order Modification Request is used to change the parameters of an existing order.

Do not use this message to cancel the remaining quantity of an outstanding order. The **Order Cancel Request** message should be used to cancel the remaining quantity of an outstanding order.

The Order Modification request will only be accepted if the order can successfully be pulled back from the exchange trading system without fully executing. Requests that cannot be processed will be rejected using the Cancel Reject message. The Cancel Reject message will provide the ClOrdID and OrigClOrdID values that were specified on the Order Modification Request message for identification.

Note that while it is necessary for the ClOrdID to change and be unique, the OrderID field assigned by NASDAQ Futures does not necessarily have to change as a result of the Order Modification request.

Only price, quantity, tif, order type, Account ID and AllocAccount can be changed via the cancel/replace request message. All other fields should be retransmitted as sent in the original order.

Following changes are allowed for tif.

- DAY to GTC or IOC
- GTC to DAY or IOC

The Participant code for the original order is carried over to the replacement.

The Order Modification Request Message is described in the following table:

| Tag | Field Name | Req'd | Comments |
|-----|------------------------|----------|---|
| | Standard Header | Y | MsgType = G |
| 41 | OrigClOrdID | Y | ClOrdID of the original order to cancel, as assigned by the originating participant (Firm). Must be 30 characters or less. |
| 11 | ClOrdID | Y | Unique identifier of replacement order as assigned by firm. Note that this identifier will be used in ClOrdID field of the Cancel Reject Message if the replacement request is rejected. Must be 30 characters or less. |
| 21 | HandlInst | N | If provided, must be set to: 1 = Automated execution order, private, no Broker intervention |
| 55 | Symbol | Y | 1 – 6 character Options Root/Futures Symbol. Spaces, periods, commas not allowed. |
| 54 | Side | Y | Side of order - Valid values: 1 = Buy 2 = Sell Must match original side. |
| 38 | OrderQty | Y | OrderQty of the replace order. |
| 40 | OrdType | Y | Valid values: 1 = Market 2 = Limit |
| 44 | Price | Y | Price field is required for Limit Orders. The price can have up to 10 whole numbers and a precision of up to 8 decimals. |
| 37 | OrderID | N | Unique identifier of most recent order as assigned by NASDAQ Futures. |

| | | | |
|------|-------------------------|----------|--|
| 109 | ClientID | N | Used for firm identification. The firm identifier must be a valid mnemonic assigned by the exchange and the firm must be an approved member of the exchange. If this field is not provided by the firm, the default mnemonic associated with the FIX port will be used. |
| 59 | TimeInForce | N | If not provided, the time in force of the original order carries through to all replacements. Following changes in TIF are allowed. DAY to GTC or IOC GTC to DAY or IOC |
| 1 | Account | Y | Must be 10 characters or less |
| 167 | SecurityType | Y | Valid value = 'FUT' or 'OPT' |
| 541 | MaturityDate | Y | Month, Day and Year of the maturity. Format YYYYMMDD (e.g., 20150918 to represent Sept 18, 2015) |
| 201 | PutOrCall | N | 0 = put 1 = call Required for 'SecurityType' = OPT' |
| 202 | StrikePrice | N | Strike Price for option: Valid values: 0 – 999999.99999999 Required for 'SecurityType' = OPT' |
| 79 | AllocAccount | N | Exchange Internal Firm Identifier of the Directed Participant for Directed Order Flow; should not exceed 4 characters. |
| 6606 | TraderID | Y | Trader ID Maximum length = 8 Must match original. |
| | Standard Trailer | Y | |

Participant Trade

Participants can report matched trades to NASDAQ Futures that were negotiated and agreed upon away from the exchange (e.g. over the phone or through a different system).

The two types of trades that can be reported are Block and EFRP. Both Block and EFRP trades may contain a "late" indicator for instances when the reporting party could not report them at the time of the transaction.

The response to this message will be in the form of execution reports on the individual orders.

| Tag | FieldName | Reqd | Description |
|-------|------------------------|----------|---|
| | Standard Header | Y | MsgType = T |
| 55 | Symbol | Y | 1 – 6 character Options Root/Futures Symbol. Spaces, periods, commas not allowed. |
| 541 | MaturityDate | Y | Month, Day and Year of the maturity. Format YYYYMMDD (e.g., 20150918 to represent Sept 18, 2015) |
| 167 | SecurityType | Y | Valid value = 'FUT' or 'OPT' |
| 201 | PutOrCall | N | 0 = put 1 = call Required for 'SecurityType' = OPT' |
| 202 | StrikePrice | N | Strike Price for option: Valid values: 0 – 999999.99999999 Required for 'SecurityType' = OPT' |
| 44 | Price | Y | Trade price. The price can have up to 10 whole numbers and a precision of up to 8 decimals. |
| 38 | OrderQty | Y | Number of contracts traded |
| 60 | TransactTime | Y | Time trade was completed by firm (expressed in UTC). |
| 5053 | TradeType | Y | Type of Trade: B = Block P = Exchange For Physical R = Exchange For Risk O = Exchange of Options for Options |
| 75 | TradeDate | Y | Date trade occurred (usually today's date). |
| 73 | NoOrders | Y | Number of orders in the list of side follows. Valid value: '2' |
| → 67 | ListSeqNo | Y | Order Number within the list. This number must be unique within a given order list message, but may be reused in other order list messages. |
| → 11 | ClOrdID | Y | Unique identifier of the order as assigned by firm. Must be 30 characters or less. |
| → 109 | ClientID | Y | Used for firm identification. The firm identifier must be a valid mnemonic assigned by the exchange and the firm must be an approved member of the exchange. If this field is not provided by the firm, the default mnemonic associated with the FIX port will be used. |

| | | | | |
|---|------|-------------------------|----------|--|
| → | 6606 | TraderID | Y | Trader ID Maximum length = 8 |
| → | 54 | Side | Y | Side of order. Valid values: 1 = Buy 2 = Sell |
| → | 1 | Account | Y | Must be 10 characters or less. |
| | 77 | OpenClose | Y | O = opening position C = closing position |
| → | 47 | OCCClearingAccount | N | Required if ParticipantCode (Tag 6299) is not provided. This is the OCC clearing account type. Please refer to NASDAQ Futures Rules and section 9 below for more information C = Customer order F = Firm order M = NASDAQ Futures registered market maker order |
| → | 440 | ClearingAccount | N | Up to 5-character alphanumeric. If tag is not supplied, spaces will be used. This field is passed through to the OCC sub-account/multi-account field. Note: NASDAQ Futures will forward only left most 4 characters to OCC. |
| → | 439 | ClearingFirm | N | CMTA Number (firm that will clear the trade) up to 5-character numeric. If tag not supplied, this order will not be a CMTA. |
| → | 5256 | AccountOrigin | N | Required if ParticipantCode (Tag 6299) is not provided. Segregated or non-segregated origin types. Please refer to NASDAQ Futures Rules and section 9 below for more information <u>Valid values:</u> 1, 2 |
| → | 582 | CustomerOrderCapacity | N | Required if ParticipantCode (Tag 6299) is not provided. This is Customer Type Indicator (CTI) code. Please refer to NASDAQ Futures Rules and section 9 below for more information <u>Valid values:</u> 1, 2, 3, 4 |
| → | 6299 | ParticipantCode | N | The internal Participant Code. Please refer to NASDAQ Futures Rules and section 9 below for more information <u>Valid values:</u> A,B,C,D,E,F,G,H,I |
| → | 58 | Text | N | Firms can use this field in the order message to supply Optional clearing information that is sent to OCC as supplementary data. If field is supplied, NASDAQ Futures will allow only 13 characters and use it for supplementary information in the order. |
| | | Standard Trailer | Y | |

Execution Report

The execution report message is used to:

1. Confirm the receipt of an order
2. Confirm changes to an existing order (i.e. accept cancel and replace requests)
3. Confirm Participant Trade reports
4. Relay order status information
5. Relay fill information on working orders
6. Reject orders

Each execution message will contain information that will describe the current state of the order and execution status as understood by NASDAQ Futures. State changes will be sent as separate messages and will not be used to also convey new partial fill details:

| Tag | Field Name | Req'd | Comments |
|-----|-----------------|-------|---|
| | Standard Header | Y | MsgType = 8 |
| 37 | OrderID | Y | OrderID, as assigned by NASDAQ Futures, is required to be unique for each chain of orders. |
| 70 | AllocId | N | Unique identifier of the transaction that caused the execution. Will be 0 if not available |
| 17 | ExecID | Y | Unique identifier of execution message, such as a Trade ID, as assigned by NASDAQ Futures. Uniqueness is guaranteed within a single trading day for a given Firm Mnemonic. Receiving Firms should treat it as a free-form string. Assigned IDs should not exceed 36 characters. |
| 20 | ExecTransType | Y | Identifies transaction type Valid values: 0 = New 1 = Cancel 3 = Status (OrdStatus=3(Done For Day)) |
| 76 | ExecBroker | N | Exec Broker associated with the order as specified in order entry. See table for possible values |
| 150 | ExecType | Y | Describes the type of execution report. Valid Values: 0 = New 1 = Partial Fill 2 = Filled 3 = Done for day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace F = Replace Rejected |

| | | | |
|-----|------------------|---|--|
| 39 | OrdStatus | Y | Describes the current state of a CHAIN of orders, same scope as OrderQty, CumQty, LeavesQty, and AvgPx Valid Values: 0 = New 1 = Partial Fill 2 = Filled 3 = Done for day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected |
| 55 | Symbol | Y | 1 – 6 character Options Root Symbol. Spaces, periods, commas not allowed. |
| 54 | Side | Y | Side of the order |
| 38 | OrderQty | Y | The number of contracts. |
| 32 | LastShares | Y | Number of contracts bought/sold on this (last) fill. Should be "0" for non-fills (Note: "fill" defined as ExecTransType = New and ExecType = Partial Fill or Fill). |
| 31 | LastPx | Y | Price of this (last) fill. Should be "0" for non-fills (Note: "fill" defined as ExecTransType = New and ExecType = Partial Fill or Fill). |
| 151 | LeavesQty | Y | Amount of contracts open for further execution. If the OrdStatus is Canceled, DoneForTheDay, Expired, Calculated, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty - CumQty. |
| 14 | CumQty | Y | Currently executed contracts for chain of orders. |
| 1 | Account | N | As specified in the NewOrder |
| 11 | ClOrdID | N | As specified in the NewOrder |
| 44 | Price | N | As specified in the NewOrder |
| 41 | OrigClOrdID | N | Required if this is in response to an Order Cancel Request or Order Cancel/Replace request (ExecType = PendingCancel, Replaced or Cancelled). ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order. |
| 109 | ClientID | Y | Used for firm identification in third-party transactions. If a ClientID was specified in the original order then it will be returned in all subsequent execution reports. If the clientId was not specified in the original order, this will refer to the clientId assigned by the port of order entry |
| 18 | ExecInst | N | G = All Or None (AON) |
| 75 | TradeDate | N | Trade date as specified in Participant Trade message. |
| 59 | TimeInForce | N | Absence of this field indicates Immediate or Cancel order |
| 40 | OrdType | N | Valid values: 1 = Market 2 = Limit |
| 60 | TransactTime | Y | Time of execution/order creation (expressed in UTC). |
| 47 | OCCOrderCapacity | N | Capacity (C, F, M) from original order. |
| 58 | Text | N | Free format text string, |

| | | | |
|------|-------------------------|----------|---|
| 9882 | LiquidityFlag | N | Will be returned within all execution reports that contain a partial or full fill. See Liquidity Flags Table below for values |
| 77 | OpenClose | Y | O = opening position C = closing position |
| 167 | SecurityType | Y | Valid value = 'FUT' or 'OPT' |
| 541 | MaturityDate | Y | Month, Day and Year of the maturity. Format YYYYMMDD (e.g., 20150918 to represent Sept 18, 2015) This will not be present If ExecType = 8 - Rejected |
| 201 | PutOrCall | N | 0 = put 1 = call Present for 'SecurityType' = OPT' |
| 202 | StrikePrice | N | Strike Price for option: Valid values: 0 – 999999.99999999 Present for 'SecurityType' = OPT' |
| 440 | ClearingAccount | N | Up to 5-character alphanumeric. |
| 439 | ClearingFirm | N | CMTA Number (firm that will clear the trade) upto 5-character numeric. If this tag was supplied on order entry, it will be passed along here |
| 6299 | ParticipantCode | N | Participant Code from original order. <u>Valid values:</u> A,B,C,D,E,F,G,H,I As specified in the NewOrder |
| 582 | CustOrderCapacity | N | CustOrderCapacity (CTI code) from original order. |
| 5256 | AccountOriginType | N | Segregated or non-segregated origin type from original order. Valid values: 1, 2 |
| 1 | Account | N | Account of the firm. Maximum length = 10 As specified in the NewOrder |
| 6606 | TraderID | Y | Trader ID Maximum length = 8 |
| | Standard Trailer | Y | |

| Liquidity Flags | |
|-----------------|---|
| Flag | Value |
| A | Executed on NASDAQ Futures- Added Liquidity (maker) |
| R | Executed on NASDAQ Futures- Removed Liquidity (taker) |
| B | Block trade reported to NASDAQ Futures |
| E | EFRP trade reported to NASDAQ Futures |

Order Cancel Reject

The order cancel reject message is issued by NASDAQ Futures upon receipt of a Cancel Request or Cancel/Replace Request Message that cannot be honored.

The format of the Order Cancel Reject Message is as follows

| Tag | Field Name | Req'd | Comments |
|-----|-------------------------|----------|--|
| | Standard Header | Y | MsgType = 9 |
| 37 | OrderID | Y | If the cancel reject is for an unknown order this field will contain the text "Unknown". Otherwise, it will contain the OrderID of the last order in the chain of orders. |
| 11 | ClOrdID | Y | Unique order id assigned by broker to the cancel request or to the replacement order. |
| 41 | OrigClOrdID | Y | ClOrdID that could not be canceled/replaced. ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order. |
| 39 | OrdStatus | Y | OrdStatus value after this cancel reject is applied. |
| 102 | CxlRejReason | N | Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option (Used for unidentified business reasons.) 3 = Order already in Pending Cancel status |
| 58 | Text | N | See "Rejected Cancel Reasons" in section 7 |
| 434 | CxlRejResponseTo | Y | Identifies the type of request that a Cancel Reject is in response to. <u>Valid values:</u> 1 - Order Cancel Request 2 - Order Cancel/Replace Request |
| | Standard Trailer | Y | |

Purge/Reset Request from Firm

A firm can send a purge request to purge all its orders. Firm also need to send a Reset request before sending new order if it receives a RapidFire Notification from the exchange.

| Tag | Name | Required | Description |
|------|------------------------|----------|---|
| | Standard Header | Y | MsgType = q (OrderMassCancelRequest) |
| 109 | ClientID | N | If provided, must be a valid NASDAQ Futures MPID/Firm Mnemonic. If not provided Port' default MPID/Firm Mnemonic will be used |
| 11 | ClOrderID | Y | Unique ID of Purge/Reset Request as assigned by the firm. Must be unique for the trading session. |
| 311 | IssueSymbol | N | IssueSymbol to purge or reset. Absence of this tag implies that the request is at a firm level and all orders associated with the ClientID on the request will be purged. |
| 530 | RequestType | Y | Purge/Reset Type. Valid Values Are: 8 – Reset 2 – Purge |
| 6606 | TraderID | Y | Trader ID Maximum length = 8 |

RapidFire Notification, Purge/Reset Response

NASDAQ Futures will use this message to notify firms when Rapid Fire Risk Protection is triggered in an underlying if the firm is configured for risk protection on the exchange trading system. Also, this message will be used to respond to any purge or Underlying Reset request received from the firm.

| Tag | Name | Required | Description |
|------|-------------------------|----------|--|
| | Standard Header | Y | MsgType = r (OrderMassCancelReport) |
| 109 | ClientID | Y | NASDAQ Futures Firm mnemonic |
| 37 | OrderID | Y | Exchange assigned unique Identifier of the notification for the trading session. It will be blank if tag 531 is 0 (request is rejected). |
| 11 | ClOrderID | N | Present if this is a response to a purge or reset request from the firm. |
| 530 | RequestType | N | Present if this is a response to Firm's Purge or Reset Request. Valid Values are: 8 – Reset 2 – Purge |
| 531 | Response | Y | 0 – Purge/Reset Request Rejected. Tag 532 contains more information. 7 - Purge by another port (FIX/SQFor system support) 8 – Purge/Reset Request Successful. 9 – RapidFire Notification |
| 532 | RejectReason | N | Present if tag 531 is 0. Valid Values are: 0 = Feature Not Supported 'S' = Invalid symbol 'F' = Invalid Firm 'H' = Invalid Trader Id 6 = Invalid Client order Id 2 = Invalid Mass Cancel type 7 = Firm not enabled for Risk protection |
| 311 | IssueSymbol | N | IssueSymbol that is purged/reset or rapid fired. Absence of this tag implies that the response/notification is at a firm level. |
| 6606 | TraderID | N | Trader ID Maximum length = 8 |
| 58 | Text | N | Provides additional information about this message. |
| | Standard Trailer | Y | |

Pre Trade Risk Notification

NASDAQ Futures will use this message to notify firms when any activity for the Group ID/ Trader ID/ Firm reaches the defined thresholds. This message is used to send the warning as well as cutoff notifications.

| Tag | Name | Required | Description |
|------|-------------------------|----------|---|
| | Standard Header | Y | MsgType =CB(PreTradeRiskNotification) |
| 6558 | RiskIdType | Y | F= Firm T= Trader G = Group |
| 5387 | RiskId | Y | Firm/ Trader Id/ Group Name |
| 9106 | RiskStatus | Y | 0 = Reset 1 = 70% (Warning Notification) 2 = 80% (Warning Notification) 3 = 90% (Warning Notification) 4 = 100% (Cutoff Notification) |
| 5500 | RiskRule | Y | The rule that triggered this notification. B = Max open exposure C = Max execution exposure D = Max total open value E = Max total executed value |
| 5501 | TriggerValue | Y | Threshold dollar value |
| | Standard Trailer | Y | |

7. Order Reject/Cancel Reasons

The FIX Text field, tag 58, will be returned within all order reject and cancel messages (msgType=8) and will contain a description of the reject or cancel.

Rejected Order Reasons

| Text= <Error String> | Description. |
|----------------------------------|--------------------------------------|
| "UNABLE TO ACCEPT ORDER" | System issues. |
| "INVALID TIME FOR ACCEPTANCE" | Outside of trading hours |
| "NOT OPEN FOR TRADING" | Product is not open for trading |
| "UNACCEPTABLE VOLUME" | Incorrect order volume |
| "INVALID LIMIT PRICE" | Invalid price |
| "LIMIT TOO DEEP" | Reference price is out of bounds |
| "INVALID CLEARING" | Invalid clearing |
| "IN TRADING HALT" | Product is in trading halt |
| "REQUIRED TAG MISSING" | Required tag not present |
| "INVALID FIRM" | Invalid firm |
| "INVALID TRADER" | Invalid trader |
| "INVALID PARTICIPANT" | Invalid participant code |
| "INVALID BUY/SELL" | Invalid product buy/ sell |
| "INVALID KIND" | Invalid product put/ call |
| "INVALID EXPIRATION" | Invalid product expiration |
| "INVALID STRIKE PRICE" | Invalid product strike price |
| "INVALID SYMBOL" | Invalid product |
| "INVALID ORDER TYPE" | Invalid order type |
| "INVALID OPEN/CLOSE" | Invalid open close indicator |
| "INVALID TIME IN FORCE" | Invalid order TIF |
| "INVALID EXEC BROKER" | Invalid exec broker |
| "FEATURE NOT SUPPORTED" | Feature not supported |
| "INVALID SECURITY TYPE" | Invalid product security type |
| "INVALID CUSTOMER ID ACCOUNT" | Invalid customer id |
| "INVALID CL ORD ID" | Invalid client order id |
| "INVALID ORIG CL ORD ID" | Invalid original client order id |
| "INVALID DIRECTED ACCOUNT" | Invalid directed account |
| "INVALID EXEC INST" | Invalid execution instruction |
| "INVALID NUM ORDERS" | Invalid number of orders in the list |
| "INVALID MIN QUANTITY" | Invalid min quantity specified |
| "INVALID MASS CANCEL TYPE" | Invalid mass cancel type |
| "RISK PROTECTION RESET REQUIRED" | Reset needed |
| "PRE TRADE RISK REJECT" | Pre trade risk reject |

Cancel RejectReason

The FIX Text field, tag 58, will be returned within all cancel reject messages (msgType=9) and will contain a description of the reject or cancel

| Text= <Error String> | Description. |
|-------------------------------|--|
| "TARGET ORDER NOT FOUND" | Target order not found |
| "ORDER ALREADY FILLED" | Order already filled |
| "ORDER ALREADY CANCELLED" | Order already cancelled |
| "CANCEL BUY/SL DOESN'T MATCH" | Side does not match on Cancel |
| "CANCEL SYMBOLS DO NOT MATCH" | Symbol does not match on cancel |
| "CANT REPLACE SYMBOL" | Cannot replace symbol |
| "TOO LATE TO CANCEL" | Too late to cancel the order |
| "BAD LEAVES ON CANCEL" | Invalid leaves on the replace |
| "REQUIRED TAG MISSING" | Required tag not present |
| "CLEARING MISMATCH" | Clearing mismatch on replace |
| "IOC CANCEL" | Immediate ir Cancel order |
| "USER CANCEL" | User requested cancel |
| "PRODUCT HALTED" | This order was cancelled due to a trading halt in this product |

9. Participant, CTI, Origin, and OCC account type codes

NASDAQ Futures Participants are required to either a) enter a ParticipantCode on each order that represents a particular combination of CTI, Account Origin, and OCC Clearing Account Type codes, or b) enter each CTI, Origin, and OCC Clearing Account Type code explicitly on each order.

The FIX values representing the code combinations are listed below. All other code combinations are invalid. Orders received with invalid combinations will be rejected.

Valid CTI Code, Origin, OCC Account type combinations:

| Participant Code | CTI Code | Origin Code | OCC C/F/M | Description |
|------------------|----------|-------------|-----------|--|
| A | 1 | 1 | M | Transactions initiated and executed by an individual Member for his own account, for an account he controls or for an account in which he has ownership or financial interest; Segregated Funds |
| B | 1 | 2 | M | Transactions initiated and executed by an individual Member for his own account, for an account he controls or for an account in which he has ownership or financial interest; Non-Segregated Funds |
| C | 2 | 1 | M | Transactions executed for the proprietary account of an NASDAQ Futures Member; Segregated Funds |
| D | 2 | 2 | M | Transactions executed for the proprietary account of an NASDAQ Futures Member; Non-Segregated Funds |
| E | 2 | 1 | F | Transactions executed for the proprietary account of an NASDAQ Futures Member Firm; Segregated Funds |
| F | 2 | 2 | F | Transactions executed for the proprietary account of an NASDAQ Futures Member Firm; Non-Segregated Funds |
| G | 3 | 1 | M | Transactions where an individual Member executes for the personal account of another individual Member, for an account the other individual Member controls or for an account in which the other individual Member has ownership or financial interest; Segregated Funds |
| H | 3 | 2 | M | Transactions where an individual Member executes for the personal account of another individual Member, for an account the other individual Member controls or for an account in which the other individual Member has ownership or financial interest; Non-Segregated Funds |
| I | 4 | 1 | C | Transactions not meeting the definition of CTI 1, 2 or 3. (These should be non-Member customer transactions.) Segregated Funds |

10. Revision History

| Revision # | Date | Change |
|------------|------------|--|
| 1 | 5/13/2013 | Initial release |
| 1.1 | 7/19/2013 | Added the following tags to the Execution Report message: 70, 76, 109, 440, 439 Updated Pre Trade Risk Notification |
| 1.2 | 11/20/2013 | Updated Pre Trade Risk Notification Message Type |
| 1.3 | 02/10/2014 | TransactTime (tag 60) in Execution report message has been changed to REQ'D. Changed TargeCompId to 'NQFX' |

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