Dealer ETFs
Rules of Engagement
FIX 4.4 PROTOCOL SPECIFICATIONS
16/04/2020

Document Control

Date	Synopsis of Change
23/10/2012	Initial Document from FIX 4.4 Options RoE
09/11/2012	Added missing value of 0 for Side field in Order Cancel Request
10/06/2013	Updated SecurityType to ETF
04/09/2013	Added description of message TradeCaptureReportAck
25/09/2013	Fixed the order of the fields in a Leg repeating group for execution report
18/10/2013	Added CustomDKReason for Final levels rejection
23/07/2014	Several corrections and comments improvements
20/11/2014	Send QuoteReqID in NewOrderMultiLeg messages
06/01/2015	Specified that the "Fixed Amount" value depends on a setting
03/03/2015	Added missing tag 588 in Execution Report
06/03/2015	Improved description of ExpireTime fields
12/03/2015	Added the NavDate field in the QuoteRequest
20/09/2017	Added IoIType and support for Trade-Axe and IoI distinction
21/09/2017	Added MiFID II requirements
20/12/2017	Final review of MiFID II changes
01/05/2018	Added missing value of 1 for Quote Response Type field in Quote Response
23/11/2018	Modified IOIs to support Cancel/Replace feature

1 Purpose

This document defines the rules of engagement for dealers wishing to connect to RFQ-hub electronically via FIX (Financial Information Exchange) protocol for the communication of quotes, orders and executions on ETFs.

2 Scope

This document defines the rules of engagement for RFQ-hub at the Application Level.

- The application messages supported by RFQ-hub
- The tags within each message that are sent and expected
- The range of values that are supported for each tag

This document does NOT include session level message information. Standard FIX 4.4 session-level messages will be used.

3 FIX Version

RFQ-hub supports the following FIX version:

- FIX Version 4.4

RFQ-hub conforms to standard message Header and Trailer as defined by the FIX specification for FIX 4.4.
To define additional information, some FIX 5.0 tags are used.
Please refer to www.fixprotocol.org for the definition of mandatory fields.

4 MiFID II

4.1 Identification of the parties

Customers accessing the POSIT RFQ venue directly will be required to send additional tags to identify the parties to the order.
Tag 100 will be the key parameter to identify whether the trade is to be executed on POSIT RFQ MTF. This should be combined with tag 2704 value to get the execution destination information.
Virtu will support clients sending the following additional information upon order submission:

- Client Identification Code (LEI)
- Investment Decision Maker - this can be an LEI (for a firm), National ID (for an individual) or Algo ID (for an algorithm)
- Execution Decision Maker - this can be an LEI (for a firm), National ID (for an individual) or Algo ID (for an algorithm)

Virtu will support the sending of this information as short codes. The purpose of the short code is to reduce the amount of sensitive data handled by the trading system and to minimise any latency impact with smaller message sizes. These short codes will each represent an identifier such as an LEI, Algo ID or national person. Clients will need to provide Virtu with short to long code mappings by end of each trading day in order to facilitate accurate transaction reporting.
POSIT RFQ venue will send events timestamps with millisecond granularity.

4.2 Trade Reporting

For trades executed as a Systematic Internaliser (SI) and reported as such in tag 2524 (TradeReportingIndicator), the MIC of the SI should be in tag 30 (LastMkt) in the execution reports.
For trades executed on a Venue which is not POSIT RFQ MTF and reported as such in tag 2524 (TradeReportingIndicator), the MIC of the Venue should be in tag 30 (LastMkt) in the execution reports.
When executed on POSIT RFQ MTF, TradingVenueRegulatoryTradeID (TVTIC) will be provided in the New Order Multi Leg Message (AB) and in the Trade Capture Report Message (AE). If this type of message is not supported, please note that we will provide an End Of Day file that will include TVTIC as well.

4.3 Timestamps

POSIT RFQ venue will send events timestamps with millisecond granularity.

5 Instruments Supported

- Options
- Futures
- Forwards
- **ETFs**
- StructuredProducts

6 Symbology

RFQ-hub uses IDSource, SecurityID, and Symbol to identify a security. Primary identifier for a security is the IDSource and its associated value in SecurityID. RFQ-hub supports the following IDSource:

- 2 = Sedol
- 5 = Ric Code
- 8 = Exchange Symbol
- A = Bloomberg Symbol

Bloomberg symbols could however be used in tag Symbol.
Primary exchange of a security dictates what IDSource RFQ-hub will handle.

7 Timestamps

All timestamps are in Coordinated Universal Time (UTC)

8 Session-Level Reject Messages

RFQ-hub recommends that application-level messages be used for all message rejections. For example:

- NewOrderMultiLeg(35=AB) should be rejected with Execution Report messages that specify rejected as the OrdStatus and/or ExecType (35=8, 39=8, 150=8)
- OrderCancelRequest (35=F) should be rejected using OrderCancelReject (35=9)
- QuoteRequest (35=R) should be rejected using QuoteRequestReject (35=AG)

In some situations however, the correct response could be to send a Reject (35=3) because of issues at the session level. In that case, RFQ-hub will record this Reject messages and flag the issue for investigation.

9 Application Messages Supported

9.1 Messages list

Below are the following application messages RFQ-hub supports:

Tag 35	Application Message
6	Indication of Interest
8	Execution Report
9	Order Cancel Reject
AB	New Order Multi Leg
AE	Trade Capture Report
AG	Quote Request Reject
AI	Quote Status Report
AJ	Quote Response
F	Order Cancel Request
Q	Don't Know
R	Quote Request
S	Quote
Z	Quote Cancel

9.2 Messages flow summary diagram

IOI

RFQ-hub		**Dealer**
	IOI *35=6* ←	Sales / Trader sends an IOI or an Axe to his clients

Quotes

RFQ-hub		**Dealer**
Client sends an RFQ to Investment Banks	QuoteRequest *35=R* →	
	QuoteStatusReport Acknowledge *35=AI 297=0* ←	FIX Dealer system acknowledges the RFQ
	OR	**OR**
	QuoteStatusReport Pass *35=AI 297=11* ←	FIX Dealer system passes the RFQ on to RFQ-hub front-end
	OR	**OR**
	QuoteRequestReject *35=AG 658=10 58=reason for quote reject* ←	Sales / Trader rejects the request
	Quote *35=S* ←	Sales / Trader responds with a quote
Client sends feedback	QuoteResponse Ended *35=AJ 694=6* →	
	QuoteCancel SpecificQuote *35=Z 117=[QuoteId] 298=1* ←	Sales / Trader cancels the previous quote

Orders

RFQ-hub		Dealer
Client sends a trade on a quote	NewOrderMultiLeg PreviouslyQuoted *35=AB 40=D* →	
OR	**OR**	
Client sends a routed order	NewOrderMultiLeg RoutedOrder (Market,Day) *35=AB 40=1 59=0* →	
	ExecutionReport New *35=8 150=0 39=0* ←	Sales / Trader accepts the trade
	OR	**OR**
	ExecutionReport Rejected *35=8 150=8 39=8* ←	Sales / Trader rejects the trade
	ExecutionReport Trade Fill *35=8 150=F 39=2* ←	Sales / Trader sends final levels
Client requests the deal balance cancellation	OrderCancelRequest *35=F* →	
	OrderCancelReject *35=9 102=0* ←	Sales / Trader rejects the Cancel Request

9.3 Messages descriptions

9.3.1 Pre-Trade

9.3.1.1 Indication of Interest

Direction	From Dealer to RFQ-hub
Purpose	To notify the client of merchandise the sell-side is buying or selling in either a proprietary or agency capacity
Sent in response to	N/A
Possible responses	N/A

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 6
23	IOIid	Y	Unique identifier of IOI message.
28	IOITransType	Y	RFQ-hub supports: N = New C = Cancel R = Replace
26	IOIRefID	N	Reference the IOIid of a previous active Indication of Interest. Conditionally required when IOITransType = *Cancel* or *Replace*
20701	IOIType	Y	Type of the interest the sell-side wishes to create. Either Indication Of Interest (IoI) which requires a concrete strategy to be specified (Call, Put, Future, ETF), or a TradeAxe which requires only Asset class (Volatility, Delta One) RFQ-hub supports: V = Volatility D = Delta One I = Ioi
55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
48	SecurityID	N	Alternate security identifier
22	SecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
167	SecurityType	N	Security Type is not required for Trade Axes on Volatility or Delta One, because the concrete strategy doesn't have to be determined Conditionally required when IOIType = *Ioi* RFQ-hub supports: CS = Common Stock FUT = Future OPT = Option
202	StrikePrice	N	Relevant when IOIType = *Ioi*
201	PutOrCall	N	Relevant when IOIType = *Ioi* RFQ-hub supports: 0 = Put 1 = Call

54	Side	Y	Side for the strategy. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
854	QtyType	N	Units in which the quantity is expressed. Absence of this field indicates "Unit." RFQ-hub supports: 0 = Units 2 = Notional
27	IOIQty	N	Quantity in numeric value
15	Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
62	ValidUntilTime	N	Indicates when this IOI expires (expressed in UTC). By default it will take the value \`tomorrow @ 00:00:00\`. If specified the maximum value enforced will be \`today + 8 days @ 00:00:00\`
58	Text	N	Text comments.
215	NoRoutingIDs	N	Optional when canceling a previous IoI. Conditionally required when IOITransType = *Cancel* or *Replace*
=> 216	RoutingType	Y	RFQ-hub supports: 1 = Target Firm 2 = Target List (will be interpreted as RFQ-hub network)
=> 217	RoutingID	N	For firms, the expected identifiers are RFQ-hub firm IDs Conditionally required when RoutingType = *Target Firm*
	Standard Trailer	Y	

9.3.1.2 Quote Request

Direction	From RFQ-hub to Dealer
Purpose	Electronic submission of request for quotes. This message is generated by a new RFQ submission, a quote refresh request and a live timeframe being resent. Quote request that relate to the same RFQ can be grouped by the field RFQID<20644>, each message will have a unique QuoteReqID<131>.
Sent in response to	N/A
Possible responses	Quote Request Reject, Quote

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = R
131	QuoteReqID	Y	Unique identifier of the request assigned by the platform. Example: 131=105112233190-0
20644	RFQID	Y	RFQ ID used on the RFQ-hub platform. Multiples QuoteReqID can be sent for a defined RFQID, for each refresh request.
528	OrderCapacity	Y	RFQ-hub supports: A = Agency (AOTC) P = Principal (DEAL)
146	NoRelatedSym	Y	Number of multi-leg instruments in the request
=> 55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
=> 461	CFICode	Y	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
=> 167	SecurityType	Y	RFQ-hub supports: MLEG = Multi Leg Instrument
=> 20167	StrategyType	Y	RFQ-hub supports: ETF = Etf
=> 711	NoUnderlyings	Y	Number of Underlyings for this instrument
=> => 311	UnderlyingSymbol	Y	Ticker or alternate underlying security identifier
=> => 309	UnderlyingSecurityID	Y	RFQ-hub uses this tag as the value of tag 305
=> => 305	UnderlyingSecurityIDSource	Y	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=> => 308	UnderlyingSecurityExchange	N	Underlying security's SecurityExchange. Can be used to identify the underlying security.
=> => 318	UnderlyingCurrency	N	Currency used for the UnderlyingPx. Absence of this field is interpreted as the default for the security.
=> => 810	UnderlyingPx	N	Reference price of the underlying used as reference for the quote.
=> 303	QuoteRequestType	Y	RFQ-hub supports: 1 = Manual
=> 537	QuoteType	N	RFQ-hub supports: 0 = Indicative 1 = Tradeable

=>	54		Side	N	Side for the strategy. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
=>	38		OrderQty	N	Strategy quantity. For multi-leg strategies, order quantity contains the base leg quantity.
=>	15		Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	1		Account	N	Account identifier
=>	555		NoLegs	Y	Each leg is handled as an instrument leg of this MLEG instrument Number of multi-leg instruments in the request
=>	=>	600	LegSymbol	Y	Ticker or alternative identifier
=>	=>	602	LegSecurityID	N	RFQ-hub uses this tag as the value of tag 603.
=>	=>	603	LegSecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=>	=>	608	LegCFICode	Y	Uses the ISO standard (Classification of Financial Instrument) ISO 10962. Always "EMXXXX" for ETFs
=>	=>	609	LegSecurityType	Y	RFQ-hub supports: CASH = Cash
=>	=>	616	LegSecurityExchange	N	Market used to help identify a security. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
=>	=>	624	LegSide	N	When Side = Twoway then (from the point of view of the buy-side): 1 = Buy the leg when considering buying the strategy and Sell the leg when considering selling the strategy 2 = Sell the leg when considering buying the strategy and Buy the leg when considering selling the strategy For ETFs, this can only be "Buy" as there is only one leg. RFQ-hub supports: 1 = Buy
=>	=>	556	LegCurrency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	=>	687	LegQty	Y	Number of instruments ordered
=>	=>	587	LegSettlType	N	Indicates order settlement period. Absence of this field is interpreted as Regular. Regular is defined as the default settlement period for the particular security on the exchange of execution. RFQ-hub supports: 0 = Regular 6 = Future
=>	=>	588	LegSettlDate	N	Specific date of trade settlement in YYYYMMDD format. Conditionally required when LegSettlType = *Future*
=>	=>	654	LegRefID	Y	Unique identifier for each leg within the quote request.

=>	=>	20664	LegCreationMethod	N	Conditionally required when BenchmarkType = *Nav* RFQ-hub supports: 1 = In Specie 2 = Cash
=>		692	QuotePriceType	Y	Benchmark's type is defined in field 20663. RFQ-hub supports: 2 = Per Share 6 = Basis Points Relative To Benchmark
=>		40	OrdType	Y	RFQ-hub supports: 1 = Market
=>		126	ExpireTime	N	If the RFQ is traded live, meaning it is either a Risk-Principal or Risk Price RFQ (OrderCapacity = 'P') then the ExpireTime field will be the expiry time of the live timeframe. This is a hard dead line and must be respected. Quotes after this expiry time will be ignored. If the RFQ is not traded live and the user sets an Expected Answer time then this will be placed in ExpireTime field. This is an indicative value and after this time has expired then quotes will still be accepted, as long as the RFQ is still live. If the RFQ is not traded live, there is no Expected Answer time and the RFQ is a Good Till Date (GTD) RFQ (TimeInForce = '6'), then the end date of the RFQ is placed in ExpireTime field. This is a hard dead line and must be respected. Quotes after this expiry time will be ignored. Conditionally required when OrderCapacity = *Principal* or TimeInForce = *Good Till Date*
=>		60	TransactTime	Y	The time when the quote request was initiated/released by the trader or trading system.
=>		25002	MiscFeeIndicator	N	Absence of this field indicates MiscFee "Not Requested" RFQ-hub supports: 0 = Not Requested 1 = Requested But Not Required 2 = Required
=>		453	NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier
=>	=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 3 = Client Id 11 = Order Origination Trader 13 = Order Origination Firm 122 = Investment Decision Maker (FIX 5.0 value)

=> => 2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
=> 2593	NoOrderAttributes	N	MiFID II
=> => 2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=> => 2595	OrderAttributeValue	N	MiFID II
=> 100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
=> 2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
=> 18	ExecInst	N	Can contain multiple instructions, space delimited.
=> 59	TimeInForce	N	Absence of this field indicates Day quote request. RFQ-hub supports: 0 = Day 1 = Good Till Cancel 6 = Good Till Date
=> 20060	StartTime	N	If the RFQ is traded live, meaning it is either a Risk-Principal or Risk Price RFQ (OrderCapacity = 'P') then the StartTime field will be the start time of the live timeframe. This is the time from which the dealer should start sending Quotes. Conditionally required when OrderCapacity = *Principal*
=> 20663	BenchmarkType	N	RFQ-hub supports: 1 = Price 2 = Nav
=> 20665	NavDate	N	NAV date in YYYYMMDD format. Relevant when BenchmarkType = *Nav*
58	Text	N	Text comments.
1208	TickIncrement	N	MiFID II This value needs to be enabled at the session level. Tick increment for stated price range. Specifies the valid price increments at which a security can be quoted and traded. If not present, no tick size regime applies.
	Standard Trailer	Y	

9.3.1.3 Quote Status Report

Direction	From Dealer to RFQ-hub
Purpose	Used to indicate that the quote request has been acknowledged by the Dealer FIX system or to notify RFQ-hub that the request will be routed to a dealer on RFQ-hub front-end.
Sent in response to	Quote Request
Possible responses	N/A

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AI
131		QuoteReqID	Y	Matching ID from Quote Request. Example: 131=105112233190-0
117		QuoteID	Y	set to "N/A"
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier P = Short Code Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 1 = Executing Firm 12 = Executing Trader 53 = Trader Mnemonic (FIX 5.0 value) 66 = Market Maker (FIX 5.0 value) 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
2593		NoOrderAttributes	N	MiFID II
=>	2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=>	2595	OrderAttributeValue	N	MiFID II
55		Symbol	Y	Short Strategy Name Always "ETF" for ETFs

461	CFICode	N	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
15	Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
1	Account	N	Account identifier
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
297	QuoteStatus	Y	When answering to a QuoteRequest message: Accepted indicates that the quote request has been acknowledged Pass indicates that the quote request has to be passed on to a dealer on RFQ-hub front-end RFQ-hub supports: 0 = Accepted 11 = Pass
58	Text	N	Text comments.
	Standard Trailer	Y	

9.3.1.4 Quote Request Reject

Direction	From Dealer to RFQ-hub
Purpose	Used to reject a quote request.
Sent in response to	Quote Request
Possible responses	N/A

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AG
131		QuoteReqID	Y	Matching ID from Quote Request. Example: 131=105112233190-0
658		QuoteRequestRejectReason	Y	RFQ-hub supports: 1 = Unknown Symbol 2 = Exchange Closed 3 = Quote Request Exceeds Limit 4 = Too Late To Enter 5 = Invalid Price 6 = Not Authorized To Request Quote 7 = No Match For Inquiry 8 = No Market For Instrument 9 = No Inventory 10 = Pass 99 = Other
146		NoRelatedSym	Y	Number of multi-leg instruments in the request
=>	55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier P = Short Code Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 1 = Executing Firm 12 = Executing Trader 53 = Trader Mnemonic (FIX 5.0 value) 66 = Market Maker (FIX 5.0 value) 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person

2593	NoOrderAttributes	N	MiFID II
=> 2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=> 2595	OrderAttributeValue	N	MiFID II
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
58	Text	N	Text comments.
	Standard Trailer	Y	

9.3.1.5 Quote Response

Direction	From RFQ-hub to Dealer
Purpose	Used to reject a quote message or to cancel a previous quote request message.
Sent in response to	Quote
Possible responses	N/A

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AJ
693		QuoteRespID	Y	Unique ID assigned by RFQ-hub.
131		QuoteReqID	N	Matching ID from Quote Request. Example: 131=105112233190-0
117		QuoteID	N	Conditionally required when QuoteRespType = *Expired* or *Hit Lift*
694		QuoteRespType	Y	RFQ-hub supports: 1 = Hit Lift (traded) 3 = Expired (quote did not arrive in time) 5 = Done Away (traded but with another Dealer) 6 = Pass (ended)
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 3 = Client Id 11 = Order Origination Trader 13 = Order Origination Firm 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
2593		NoOrderAttributes	N	MiFID II
=>	2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=>	2595	OrderAttributeValue	N	MiFID II
55		Symbol	Y	Short Strategy Name Always "ETF" for ETFs

54	Side	N	Side for the strategy. When buy-side discloses the price to the non-winning dealers RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
58	Text	N	Text comments.
44	Price	N	When buy-side discloses the price to the non-winning dealers
423	PriceType	N	Conditionally required when Price has any value Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
	Standard Trailer	Y	

9.3.1.6 Quote

Direction	From Dealer to RFQ-hub
Purpose	Used by Dealer to quote an instrument.
Sent in response to	Quote Request
Possible responses	Quote Response, New Order Multi Leg

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = S
131		QuoteReqID	Y	Matching ID from Quote Request. Example: 131=105112233190-0
117		QuoteID	Y	Dealer supplied unique Quote ID
537		QuoteType	N	RFQ-hub supports: 0 = Indicative 1 = Tradeable
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier P = Short Code Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 1 = Executing Firm 12 = Executing Trader 53 = Trader Mnemonic (FIX 5.0 value) 66 = Market Maker (FIX 5.0 value) 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
2593		NoOrderAttributes	N	MiFID II
=>	2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=>	2595	OrderAttributeValue	N	MiFID II
55		Symbol	Y	Short Strategy Name Always "ETF" for ETFs

461		CFICode	Y	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
167		SecurityType	Y	RFQ-hub supports: MLEG = Multi Leg Instrument
54		Side	N	Side for the strategy. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
15		Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
1		Account	N	Account identifier
555		NoLegs	Y	Each leg is handled as an instrument leg of this MLEG instrument
=>	600	LegSymbol	Y	Ticker or alternative identifier
=>	602	LegSecurityID	N	RFQ-hub uses this tag as the value of tag 603.
=>	603	LegSecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=>	608	LegCFICode	Y	Uses the ISO standard (Classification of Financial Instrument) ISO 10962. Always "EMXXXX" for ETFs
=>	609	LegSecurityType	Y	RFQ-hub supports: CASH = Cash
=>	616	LegSecurityExchange	N	Market used to help identify a security. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
=>	624	LegSide	N	When Side = Twoway then (from the point of view of the buy-side): 1 = Buy the leg when considering buying the strategy and Sell the leg when considering selling the strategy 2 = Sell the leg when considering buying the strategy and Buy the leg when considering selling the strategy For ETFs, this can only be "Buy" as there is only one leg. RFQ-hub supports: 1 = Buy
=>	556	LegCurrency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	687	LegQty	Y	Number of instruments ordered
=>	587	LegSettlType	N	Indicates order settlement period. Absence of this field is interpreted as Regular. Regular is defined as the default settlement period for the particular security on the exchange of execution. RFQ-hub supports: 0 = Regular 6 = Future
=>	588	LegSettlDate	N	Specific date of trade settlement in YYYYMMDD format. Conditionally required when LegSettlType = *Future*
=>	686	LegPriceType	N	Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
=>	681	LegBidPx	N	For two-way requests either BidPx and/or OfferPx is required Conditionally required when LegBidPxIndicator in QuoteRequest = *Required*

=> 684	LegOfferPx	N	For two-way requests either BidPx and/or OfferPx is required Conditionally required when LegOfferPxIndicator in QuoteRequest = *Required*
=> 654	LegRefID	Y	Unique identifier for each leg within the quote as specified on the quote request
132	BidPx	N	Conditionally required when in QuoteRequest, Side = *Sell* or *Twoway*
133	OfferPx	N	Conditionally required when in QuoteRequest, Side = *Buy* or *Twoway*
134	BidSize	N	
135	OfferSize	N	
62	ValidUntilTime	N	If the tag is not present, a default value of 30 seconds (can be defaulted to another value) is defined as the validity for the quote
60	TransactTime	Y	Time this quote was initiated/released by the trader or trading system
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange Value must match the one received from the Quote Request message.
2704	ExDestinationType	N	MiFID II Value must match the one received from the Quote Request message. RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
423	PriceType	Y	Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
58	Text	N	Text comments.
136	NoMiscFees	N	Repeating group describing the additional fees.
=> 137	MiscFeeAmt	N	Miscellaneous fee value.
=> 138	MiscFeeCurr	N	Currency of miscellaneous fee. Absence of this field is interpreted as the default for the security.
=> 139	MiscFeeType	N	Indicates the type of miscellaneous fee. RFQ-hub supports: 4 = Exchange Fees 7 = Other 12 = Agent (FIX 5.0 value)
318	UnderlyingCurrency	N	Currency used for the UnderlyingPx. Absence of this field is interpreted as the default for the security.
810	UnderlyingPx	N	Reference price of the underlying used as reference for the quote. Message will be rejected if the UnderlyingPx in the Quote message is different from the UnderlyingPx in the Quote Request message for OrderCapacity = A
20167	StrategyType	N	RFQ-hub supports: ETF = Etf
26003	MarginRequirements	N	Custom tag conditionally required buy some buy-side clients
	Standard Trailer	Y	

9.3.1.7 Quote Cancel

Direction	From Dealer to RFQ-hub
Purpose	Used by dealer to cancel a previously provided quote (or all active quotes).
Sent in response to	N/A
Possible responses	N/A

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = Z
131	QuoteReqID	N	Unique identifier of the request assigned by the platform, matching ID from QuoteRequest. Example: 131=105112233190-0 Conditionally required when QuoteCancelType = *Cancel For Rfq*
117	QuoteID	Y	Dealer supplied QuoteID, set to "N/A" when QuoteCancelType = Cancel All Quotes
298	QuoteCancelType	Y	RFQ-hub supports: 1 = Cancel For Rfq 4 = Cancel All Quotes
60	TransactTime	Y	Time this quote was canceled by the trader or trading system.
	Standard Trailer	Y	

9.3.2 Trade

9.3.2.1 New Order Multi Leg

Direction	From RFQ-hub to Dealer
Purpose	Electronic submission of securities order to Dealer for execution.
Sent in response to	Quote
Possible responses	Acknowledge Order, Reject Order

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AB
11		ClOrdID	Y	Unique identifier of the order assigned by RFQ-hub Example: 11=105112-233190
131		QuoteReqID	Y	Matching ID from Quote Request. Example: 131=105112233190-0
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 3 = Client Id 11 = Order Origination Trader 13 = Order Origination Firm 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
2593		NoOrderAttributes	N	MiFID II
=>	2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=>	2595	OrderAttributeValue	N	MiFID II
1		Account	N	Account identifier

660	AcctIDSource	N	RFQ-hub supports: 1 = Bic 99 = Other
63	SettlType	N	Indicates order settlement period. Absence of this field is interpreted as Regular. Regular is defined as the default settlement period for the particular security on the exchange of execution. RFQ-hub supports: 0 = Regular 6 = Future
64	SettlDate	N	Specific date of trade settlement (SettlementDate) in YYYYMMDD format.
21	HandlInst	Y	Instructions for order handling on sell-side's trading floor. RFQ-hub supports: 1 = Automated Execution Order Private (no broker intervention) 3 = Manual Order (best execution)
18	ExecInst	N	Can contain multiple instructions, space delimited.
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
54	Side	Y	Side for the strategy. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
461	CFICode	Y	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
167	SecurityType	Y	RFQ-hub supports: MLEG = Multi Leg Instrument
20167	StrategyType	Y	RFQ-hub supports: ETF = Etf
711	NoUnderlyings	Y	Number of Underlyings for this instrument
=> 311	UnderlyingSymbol	Y	Ticker or alternate underlying security identifier
=> 309	UnderlyingSecurityID	Y	RFQ-hub uses this tag as the value of tag 305
=> 305	UnderlyingSecurityIDSource	Y	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=> 308	UnderlyingSecurityExchange	N	Underlying security's SecurityExchange. Can be used to identify the underlying security.
=> 318	UnderlyingCurrency	N	Currency used for the UnderlyingPx. Absence of this field is interpreted as the default for the security.
=> 810	UnderlyingPx	N	Reference price of the underlying used as reference for the quote.

555		NoLegs	Y	Each leg is handled as an instrument leg of this MLEG instrument
=>	600	LegSymbol	Y	Ticker or alternative identifier
=>	602	LegSecurityID	N	RFQ-hub uses this tag as the value of tag 603.
=>	603	LegSecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=>	608	LegCFICode	Y	Uses the ISO standard (Classification of Financial Instrument) ISO 10962. Always "EMXXXX" for ETFs
=>	609	LegSecurityType	Y	RFQ-hub supports: CASH = Cash
=>	616	LegSecurityExchange	N	Market used to help identify a security. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
=>	624	LegSide	N	When Side = Twoway then (from the point of view of the buy-side): 1 = Buy the leg when considering buying the strategy and Sell the leg when considering selling the strategy 2 = Sell the leg when considering buying the strategy and Buy the leg when considering selling the strategy For ETFs, this can only be "Buy" as there is only one leg. RFQ-hub supports: 1 = Buy
=>	556	LegCurrency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	687	LegQty	N	Number of instruments ordered
=>	654	LegRefID	Y	Unique identifier for each leg within the order.
=>	587	LegSettlType	N	Indicates order settlement period. Absence of this field is interpreted as Regular. Regular is defined as the default settlement period for the particular security on the exchange of execution. RFQ-hub supports: 0 = Regular 6 = Future
=>	588	LegSettlDate	N	Specific date of trade settlement in YYYYMMDD format. Conditionally required when LegSettlType = *Future*
=>	686	LegPriceType	N	Relevant when OrdType = *Previously Quoted* or *Limit* Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
=>	8016	TradingVenueRegulatoryTradeID	N	MiFID II Trading Venue Transaction Identification Code (TVTIC) - used to indicate the unique trade id per trade.
60		TransactTime	Y	The time when the order request was initiated/released by the trader or trading system.
38		OrderQty	Y	Strategy quantity. For multi-leg strategies, order quantity contains the base leg quantity.

40	OrdType	Y	RFQ-hub supports: 1 = Market 2 = Limit D = Previously Quoted
423	PriceType	Y	Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
44	Price	N	Price specified in the Quote message or Limit price for an order without a quote request. For Creation/Redemption requests (692=6, 20663=2), this is the creation/redemption cost in bps . It contains absolute cost value, the fees are specified in NoMiscFees group. Conditionally required when OrdType = *Previously Quoted* or *Limit*
15	Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
117	QuoteID	N	Dealer supplied Quote ID. Conditionally required when OrdType = *Previously Quoted*
59	TimeInForce	N	Absence of this field indicates Day order. If OrdType = Previously Quoted, Time In Force is set to ImmediateOrCancel. RFQ-hub supports: 0 = Day 1 = Good Till Cancel 3 = Immediate Or Cancel (only when OrdType = Previously Quoted) 6 = Good Till Date
126	ExpireTime	N	Conditionally required when TimeInForce = *Good Till Date*
528	OrderCapacity	Y	RFQ-hub supports: A = Agency (AOTC) P = Principal (DEAL)
58	Text	N	Text comments.
	Standard Trailer	Y	

9.3.2.2 Order Cancel Request

Direction	From RFQ-hub to Dealer
Purpose	To request the cancellation of the outstanding balance of an existing order.
Sent in response to	N/A
Possible responses	Pending Cancel, Cancel, Cancel Reject

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = F
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) when cancelling or replacing an order Example: 41=105112233190-0
37	OrderID	N	Unique identifier of most recent order as assigned by RFQ-hub.
11	ClOrdID	Y	Unique identifier of the order assigned by RFQ-hub.
1	Account	N	Account identifier
55	Symbol	Y	Short Strategy Name Must match same tag in Quote Request. Always "ETF" for ETFs
461	CFICode	Y	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
167	SecurityType	Y	RFQ-hub supports: MLEG = Multi Leg Instrument
54	Side	Y	Side for the strategy. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
60	TransactTime	Y	The time when the order cancel request was initiated/released by the trader or trading system.
58	Text	N	Text comments.
	Standard Trailer	Y	

9.3.2.3 Execution Report

Direction	From Dealer to RFQ-hub
Purpose	Confirm receipt or change of an order. Relay order status information, relay fill information, or reject orders.
Sent in response to	New Order Multi Leg, Order Cancel Request
Possible responses	Don't Know, Trade Capture Report Ack

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = 8
37		OrderID	Y	OrderID is required to be unique for each chain of orders.
11		ClOrdID	Y	Unique identifier of the order assigned by RFQ-hub.
41		OrigClOrdID	N	ClOrdID of the previous order (NOT the initial order of the day) when cancelling or replacing an order. Conditionally required when ExecType = *Canceled* or *Pending Cancel*
453		NoPartyIDs	N	Repeating group below should contain unique combinations of PartyID, PartyIDSource and PartyRole
=>	448	PartyID	Y	MiFID II The codes identifying the client or decision maker represented by this block. Data corresponding to a short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use (to PartyRole value 3): 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation)
=>	447	PartyIDSource	Y	RFQ-hub supports: D = Proprietary Custom Code N = Legal Entity Identifier O = Interim Identifier P = Short Code Identifier
=>	452	PartyRole	N	Identifies the type or role of the Party ID (e.g. Executing Broker). RFQ-hub supports: 1 = Executing Firm 12 = Executing Trader 53 = Trader Mnemonic (FIX 5.0 value) 66 = Market Maker (FIX 5.0 value) 122 = Investment Decision Maker (FIX 5.0 value)
=>	2376	PartyRoleQualifier	N	MiFID II RFQ-hub supports: 22 = Algorithm 23 = Firm Or Legal Entity 24 = Natural Person
2593		NoOrderAttributes	N	MiFID II
=>	2594	OrderAttributeType	N	MiFID II RFQ-hub supports: 0 = Aggregated Order 1 = Pending Allocation 2 = Liquidity Provision Activity Order
=>	2595	OrderAttributeValue	N	MiFID II
17		ExecID	Y	Must be unique for each Execution Report message. Maximum length is 120 characters.

19	ExecRefID	N	Identifier of the corrected or cancelled Execution Report. Conditionally required when ExecType = *Trade Cancel* or *Trade Correct*
150	ExecType	Y	Describes the specific Execution Report while OrdStatus will always identify the current order status. RFQ-hub supports: 0 = New 3 = Done For Day 4 = Canceled 6 = Pending Cancel 8 = Rejected A = Pending New F = Trade G = Trade Correct H = Trade Cancel
39	OrdStatus	Y	Identifies current status of order. RFQ-hub supports: 0 = New 1 = Partially Filled 2 = Filled 3 = Done For Day 4 = Canceled 6 = Pending Cancel 8 = Rejected
103	OrdRejReason	N	Relevant when ExecType = *Rejected*
1	Account	N	Account identifier
100	ExDestination	N	MiFID II RFQ-hub supports: XRFQ = trade executed on POSIT RFQ MTF XOFF = any other trade, executed off exchange
2704	ExDestinationType	N	MiFID II RFQ-hub supports: 0 = No Restriction 1 = Can Be Traded Only On A Trading Venue 2 = Can Be Traded Only On A Systematic Internaliser 3 = Can Be Traded On A Trading Venue Or Systematic Internaliser
2524	TradeReportingIndicator	N	MiFID II Relevant when ExecType = *New* RFQ-hub supports: 0 = Trade Has Not Been Reported 1 = Trade Has Been Or Will Be Reported By A Trading Venue As An On Book Trade 2 = Trade Has Been Or Will Be Reported As A Systematic Internaliser Seller Trade 3 = Trade Has Been Or Will Be Reported As A Systematic Internaliser Buyer Trade 4 = Trade Has Been Or Will Be Reported As A Non Systematic Internaliser Seller Trade 5 = Trade Has Been Or Will Be Reported Under A Sub Delegation Arrangement By An Investment Firm To A Reporting Facility 6 = Trade Has Been Or Will Be Reported 7 = Trade Has Been Or Will Be Reported As A Non Systematic Internaliser Buyer Trade 8 = Trade Has Been Or Will Be Reported By A Trading Venue As An Off Book Trade 9 = Trade Is Not Reportable
883	UnderlyingEndPrice	N	Price of the underlying security at the end of the agreement. Conditionally required when ExecType = *Trade* or *Trade Correct*

55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
48	SecurityID	N	Conditionally required when MultiLegReportingType = *Individual Leg Of A Multi Leg Security*
22	SecurityIDSource	N	Conditionally required when MultiLegReportingType = *Individual Leg Of A Multi Leg Security* RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
461	CFICode	Y	Uses the ISO standard (Classification of Financial Instruments) ISO 10962 Always "EMXXXX" for ETFs
167	SecurityType	Y	RFQ-hub supports: MLEG = Multi Leg Instrument
654	LegRefID	N	Conditionally required when MultiLegReportingType = *Individual Leg Of A Multi Leg Security*
54	Side	Y	RFQ-hub supports: 1 = Buy 2 = Sell
38	OrderQty	N	Number of instruments ordered. For multi-leg strategies, order quantity contains the base leg quantity when MultiLegReportingType = Multi Leg Security
40	OrdType	N	RFQ-hub supports: 1 = Market 2 = Limit D = Previously Quoted
423	PriceType	N	If specified on the order. Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
44	Price	N	If specified on the order.
15	Currency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security. It is recommended that systems provide the currency value whenever possible.
59	TimeInForce	N	Absence of this field indicates Day order. RFQ-hub supports: 0 = Day 1 = Good Till Cancel 6 = Good Till Date
32	LastQty	N	Base leg quantity bought/sold on this (last) fill. Conditionally required when MultiLegReportingType = *Individual Leg Of A Multi Leg Security* and ExecType = *Trade* or *Trade Correct*
31	LastPx	N	Price of this (last) fill. Conditionally required when ExecType = *Trade* or *Trade Correct*

30		LastMkt	N	MIC of the Venue or SI where the transaction is going to be reported. This field is meant to be used when acknowledging the deal and providing the TradeReportingIndicator: When TradeReportingIndicator = 2 or 3, it should indicate the MIC code of the systematic internaliser. When TradeReportingIndicator = 1 or 8, it should reflect the MIC of the execution venue. Relevant when ExecType = *New*
29		LastCapacity	N	RFQ-hub supports: 1 = Agent 4 = Principal
151		LeavesQty	Y	Ignored when MultiLegReportingType = Multi Leg Security. Amounts of base leg instrument open for further execution. If the OrdStatus is Canceled or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty - CumQty.
14		CumQty	Y	Ignored when MultiLegReportingType = Multi Leg Security. Currently executed base leg quantity for chain of orders.
6		AvgPx	Y	Calculated average price of all fills on this order.
60		TransactTime	N	Time the transaction represented by this ExecutionReport occurred.
21		HandlInst	N	Instructions for order handling on sell-side's trading floor. RFQ-hub supports: 1 = Automated Execution Order Private (no broker intervention) 3 = Manual Order (best execution)
58		Text	N	Text comments.
442		MultiLegReportingType	N	Conditionally required for multi-leg strategies. RFQ-hub supports: 2 = Individual Leg Of A Multi Leg Security 3 = Multi Leg Security
555		NoLegs	N	Each leg is handled as an instrument leg of this MLEG instrument Conditionally required when MultiLegReportingType = *Multi Leg Security* and ExecType = *Trade*, *Trade Correct* or *Trade Cancel*
=>	600	LegSymbol	Y	Ticker or alternative identifier
=>	602	LegSecurityID	N	RFQ-hub uses this tag as the value of tag 603.
=>	603	LegSecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=>	608	LegCFICode	Y	Uses the ISO standard (Classification of Financial Instrument) ISO 10962. Always "EMXXXX" for ETFs
=>	609	LegSecurityType	Y	RFQ-hub supports: CASH = Cash
=>	616	LegSecurityExchange	N	Market used to help identify a security. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
=>	624	LegSide	N	When Side = Twoway then (from the point of view of the buy-side): 1 = Buy the leg when considering buying the strategy and Sell the leg when considering selling the strategy 2 = Sell the leg when considering buying the strategy and Buy the leg when considering selling the strategy For ETFs, this can only be "Buy" as there is only one leg. RFQ-hub supports: 1 = Buy

=>	556	LegCurrency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	687	LegQty	N	Number of instruments ordered
=>	566	LegPrice	N	Price specified in the Quote message or Limit price for an order without a quote request. For Creation/Redemption requests (692=6, 20663=2), this is the creation/redemption cost in bps . It contains absolute cost value, the fees are specified in NoMiscFees group.
=>	637	LegLastPx	N	Price of this (last) fill for this leg of the multileg instrument. Conditionally required when ExecType = *Trade* or *Trade Correct*
=>	654	LegRefID	Y	As specified on the order, unique identifier for each leg within the order.
=>	686	LegPriceType	N	Spread is to be used for Creation/Redemptions costs and Spread requests. RFQ-hub supports: 2 = Per Unit 6 = Spread
=>	1418	LegLastQty	N	Quantity of instruments or notional (see LegQtyType) bought/sold on this (last) fill for this leg of the multileg instrument. Conditionally required when ExecType = *Trade* or *Trade Correct*
=>	21418	LegLastQtyInUnits	N	Quantity of instruments bought/sold on this (last) fill for this leg of the multileg instrument, in units Conditionally required when LegQtyType = *Notional* and LegLastQty has any value
=>	21917	LegCumQty	Y	Currently executed quantity instruments for chain of orders.
=>	21918	LegLeavesQty	Y	Amount of instruments/ open for further execution. If the OrdStatus is Canceled or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty- CumQty.
=>	21919	LegAvgPx	Y	Average price of all fills on this leg for this order.
=>	21920	LegLastMkt	Y	Market of execution on this (last) fill for this leg of the multileg instrument. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
136		NoMiscFees	N	Repeating group describing the additional fees.
=>	137	MiscFeeAmt	N	Miscellaneous fee value.
=>	138	MiscFeeCurr	N	Currency of miscellaneous fee. Absence of this field is interpreted as the default for the security.
=>	139	MiscFeeType	N	Indicates the type of miscellaneous fee. RFQ-hub supports: 4 = Exchange Fees 7 = Other 12 = Agent (FIX 5.0 value)
		Standard Trailer	Y	

9.3.2.4 Order Cancel Reject

Direction	From Dealer to RFQ-hub
Purpose	To reject a Cancel Request.
Sent in response to	Order Cancel Request
Possible responses	N/A

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 9
37	OrderID	Y	OrderID is required to be unique for each chain of orders.
11	ClOrdID	Y	Must match cancel request or message.
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) as assigned by RFQ-hub, used to identify the previous order in cancel request.
39	OrdStatus	Y	OrdStatus value after this cancel reject is applied. RFQ-hub supports: 0 = New 1 = Partially Filled 2 = Filled 3 = Done For Day 4 = Canceled 6 = Pending Cancel 8 = Rejected
1	Account	N	Account identifier
60	TransactTime	N	Time of execution/order creation (expressed in GMT)
434	CxlRejResponseTo	Y	Identifies the type of request that a Cancel Reject is in response to. RFQ-hub supports: 1 = Order Cancel Request
102	CxlRejReason	N	Code to identify reason for cancel rejection. RFQ-hub supports: 0 = Too Late To Cancel 1 = Unknown Order 3 = Order Already In Pending Cancel Or Pending Replace Status
	Standard Trailer	Y	

9.3.2.5 Don't Know

Direction	From RFQ-hub to Dealer
Purpose	To notify Dealer that an execution report has been rejected.
Sent in response to	Execution Report
Possible responses	N/A

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = Q
37	OrderID	Y	RFQ-hub Order ID as identified on problem execution.
17	ExecID	Y	ExecutionID of problem execution.
127	DKReason	Y	Reject reason RFQ-hub supports: Z = Other
20127	CustomDKReason	N	Code to identify reason for a DK message. Absence of this field indicates "Could not process". RFQ-hub supports: 0 = Could Not Process Execution Report 1 = Buy Side Rejected Final Levels
55	Symbol	Y	Short Strategy Name Always "ETF" for ETFs
54	Side	Y	Side of the order. RFQ-hub supports: 0 = Twoway 1 = Buy 2 = Sell
38	OrderQty	N	Number of instruments ordered. For multi-leg strategies, order quantity contains the base leg quantity.
32	LastQty	N	LastQty of problem execution
31	LastPx	N	LastPx of problem execution
58	Text	N	Text comments.
	Standard Trailer	Y	

9.3.2.6 Trade Capture Report

Direction	From RFQ-hub to Dealer
Purpose	To notify Dealer that their Execution report (of OrdStatus 1 or 2, corresponding to Final Levels) has been validated. Relay order status information, relay fill information including TVTIC which is a MiFID requirement.
Sent in response to	Execution Report
Possible responses	N/A

Tag		Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AE
571		TradeReportID	Y	Unique message identifier.
150		ExecType	Y	RFQ-hub supports: F = Trade
17		ExecID	Y	The ExecID of the acknowledged Execution Report.
2489		PackageID	N	MiFID II Identifier assigned to a collection of trades so that they can be analyzed as one atomic unit for risk assessment and clearing.
31		LastPx	N	
55		Symbol	Y	Short Strategy Name Always "ETF" for ETFs
555		NoLegs	N	Each leg is handled as an instrument leg of this MLEG instrument
=>	600	LegSymbol	Y	Ticker or alternative identifier
=>	602	LegSecurityID	N	RFQ-hub uses this tag as the value of tag 603.
=>	603	LegSecurityIDSource	N	RFQ-hub supports: 5 = Ric Code 8 = Exchange Symbol A = Bloomberg Symbol
=>	608	LegCFICode	Y	Uses the ISO standard (Classification of Financial Instrument) ISO 10962. Always "EMXXXX" for ETFs
=>	609	LegSecurityType	Y	RFQ-hub supports: CASH = Cash
=>	616	LegSecurityExchange	N	Market used to help identify a security. RFQ-hub supports: Reuters Exchange Mnemonics ISO MIC Codes
=>	624	LegSide	N	For ETFs, this can only be "Buy" as there is only one leg. RFQ-hub supports: 1 = Buy
=>	556	LegCurrency	N	Identifies currency used for price. Absence of this field is interpreted as the default for the security.
=>	687	LegQty	N	Number of instruments ordered
=>	588	LegSettlDate	N	Specific date of trade settlement in YYYYMMDD format.
=>	654	LegRefID	Y	As specified on the order, unique identifier for each leg within the order.

=>	8016	TradingVenueRegulatoryTradeID	N	MiFID II Trading Venue Transaction Identification Code (TVTIC) - used to indicate the unique trade id per trade.
768		NoTrdRegTimestamps	Y	Required repeating group for this message. Size of this group will have to be 0.
		Standard Trailer	Y	

10 Example Sequences

10.1 Quote request

Buy-side sends a quote request which is rejected by the sell-side.

RFQ-hub		Dealer
Client sends an RFQ to Investment Banks, with: ◦ QuoteReqID ◦ RFQID (the same identifier as the RFQ id on the platform) ◦ LegSide: Buy/Sell or no tag LegSide for a Two-way ◦ LegIDSource, LegSecurityID ◦ LegOrderQty	QuoteRequest *35=R* →	
	QuoteRequestReject *35=AG 658=10 58=reason for quote reject* ←	Sales / Trader rejects the request

10.2 Quote refresh request

Buy-side sends a quote request which is quoted by the sell-side. The buy-side sends a quote refresh on the same RFQID which is quoted by the sell-side.

RFQ-hub		Dealer
Client sends an RFQ to Investment Banks	QuoteRequest *35=R* →	
	QuoteStatusReport Acknowledge *35=AI 297=0* ←	FIX Dealer system acknowledges the RFQ
	Quote *35=S* ← ← ←	Sales / Trader responds with quote and several quote updates: ◦ BidPx ◦ OfferPx ◦ BidSize ◦ OfferSize
Client asks for a refresh	QuoteRequest *35=R* →	
	Quote *35=S* ← ← ←	Sales / Trader responds again with several quote updates

10.3 Deal reject

Buy-side sends a quote request which is quoted by the sell-side. The buy-side hits/lifts the quote but the trade is rejected by the dealer.

RFQ-hub		Dealer
Client sends an RFQ to Investment Banks	QuoteRequest *35=R* →	
	QuoteStatusReport Acknowledge *35=AI 297=0* ←	FIX Dealer system acknowledges the RFQ
	Quote *35=S* ←	Sales / Trader responds with a quote
Client hits/lifts the quote: ◦ Tag 40 = D (Previously quoted) ◦ Tag 117 = XXX (QuoteID) ◦ OrderQty = Number of instruments ◦ Price = Price in the Quote (S)	NewOrderMultiLeg PreviouslyQuoted *35=AB 40=D* →	
	ExecutionReport Rejected *35=8 150=8 39=8* ←	Sales / Trader rejects the trade: ◦ Tag 150 = 8 (Rejected) ◦ Tag 39 = 8 (Rejected)

10.4 Fully-filled deal

Buy-side sends a quote request which is quoted by the sell-side. The buy-side hits/lifts the quote and the dealer acknowledges the trade then sends the execution.

RFQ-hub		Dealer
Client sends an RFQ to Investment Banks	QuoteRequest *35=R* →	
	QuoteStatusReport Acknowledge *35=AI 297=0* ←	FIX Dealer system acknowledges the RFQ
	Quote *35=S* ←	Sales / Trader responds with a quote
Client hits/lifts the quote: ◦ Tag 40 = D (Previously quoted) ◦ Tag 117 = XXX (QuoteID) ◦ OrderQty = Number of instruments ◦ Price = Price in the Quote (S)	NewOrderMultiLeg PreviouslyQuoted *35=AB 40=D* →	
	ExecutionReport New *35=8 150=0 39=0* ←	Sales / Trader accepts the trade: ◦ Tag 150 = 0 (New) ◦ Tag 39 = 0 (New)
	ExecutionReport Trade Fill *35=8 150=F 39=2* ←	Sales / Trader sends final levels: ◦ Tag 150 = F (Trade) ◦ Tag 39 = 2 (Filled)

10.5 Accepted cancel request

Buy-side sends a quote request which is quoted by the sell-side. The buy-side hits/lifts the quote and the dealer acknowledges the trade. The buy-side sends a cancel request before the execution. The Cancel request is accepted.

RFQ-hub		**Dealer**
Client sends an RFQ to Investment Banks	QuoteRequest *35=R*	
	QuoteStatusReport Acknowledge *35=AI 297=0*	FIX Dealer system acknowledges the RFQ
	Quote *35=S*	Sales / Trader responds with a quote
Client sends a trade on a quote	NewOrderMultiLeg PreviouslyQuoted *35=AB 40=D*	
	ExecutionReport New *35=8 150=0 39=0*	Sales / Trader accepts the trade
Client requests the deal balance cancellation: ◦ Tag 41 (OrigClOrdID) = XXXX (ClOrdID to be cancelled)	OrderCancelRequest *35=F*	
	ExecutionReport PendingCancel *35=8 150=6 39=6*	FIX Dealer system acknowledges the request: ◦ Tag 150 = 6 (Pending cancel) ◦ Tag 39 = 6 (Pending cancel)
	ExecutionReport Canceled *35=8 150=4 39=4*	Sales / Trader accepts the Cancel Request: ◦ Tag 150 = 4 (Canceled) ◦ Tag 39 = 4 (Canceled)

10.6 Rejected cancel request

Buy-side sends a quote request which is quoted by the sell-side. The buy-side hits/lifts the quote and the dealer acknowledges the trade. The buy-side sends a cancel request before the execution. The cancel request is refused and the execution is sent.

RFQ-hub		**Dealer**
Client sends an RFQ to Investment Banks	QuoteRequest *35=R*	
	QuoteStatusReport Acknowledge *35=AI 297=0*	FIX Dealer system acknowledges the RFQ
	Quote *35=S*	Sales / Trader responds with a quote
Client sends a trade on a quote	NewOrderMultiLeg PreviouslyQuoted *35=AB 40=D*	
	ExecutionReport New *35=8 150=0 39=0*	Sales / Trader accepts the trade
Client requests the deal balance cancellation	OrderCancelRequest *35=F*	
	ExecutionReport PendingCancel *35=8 150=6 39=6*	FIX Dealer system acknowledges the request
	OrderCancelReject *35=9 102=0*	Sales / Trader rejects the Cancel Request: ◦ Tag 102 = 0 (Too late to cancel)
	ExecutionReport Trade Fill *35=8 150=F 39=2*	Sales / Trader sends final levels: ◦ Tag 150 = F (Trade) ◦ Tag 39 = 2 (Filled)

11 Sample FIX messages

These samples show a full RFQ to execution workflow.

11.1 Quote request (from RFQ-hub to dealer)

RFQ characteristics:

- Type: `ETF`
- Instrument: `FLEXSHARES GLB QULY REAL EST IDX ETF (GQRE UP)`
- Contracts: `600`
- Side/Direction: `Two-way`
- Ref price: `64.365`
- ExecutionDestination: `XRFQ`
- ExecutionDestinationType: `Only Venue`
- ExecutionDecisionMaker: `EDMShortCode`
- UnderlyingClientId: `ClientLEI`
- OrderOriginationFirm: `OrderOriginationFirmLEI`

```
8=FIX.4.4 9=484 35=R 34=123 49=RFQHUB 52=20200108-17:00:00.000 56=BANK 131=123456 528=P 20644=123456
146=1 55=ETF 461=EMXXXX 167=MLEG 20167=ETF 711=1 311=GQRE UP 309=GQRE.P 305=5 318=USD 810=64.365
303=1 537=1 54=0 38=600 15=USD 1=TEST 555=1 600=GQRE 602=GQRE.P 603=5 608=EMXXXX 609=CASH 616=ARCX
624=1 556=USD 687=600 587=0 654=234567 692=2 40=1 126=20200108-17:00:30.000 60=20130215-08:49:15.953
453=5 448=Adam Westloath 447=D 452=11 448=TEST 447=D 452=13 448=EDMShortCode 447=P 452=11
448=ClientLEI 447=N 452=3 448=OrderOriginationFirmLEI 447=N 452=13 59=0 20060=20200108-17:00:10.000
100=XRFQ 2704=1 10=205
```

11.2 Quote status report (from dealer to RFQ-hub)

```
8=FIX.4.4 9=99 35=AI 34=655 49=BANK 52=20200108-17:00:00.123 56=RFQHUB 55=ETF 117=N/A 131=123456 297=0
461=EMXXXX 10=128
```

11.3 Quote (from dealer to RFQ-hub)

Pricing details:

- Bid: `64.3`
- Ask: `64.4`
- Order Capacity: `DEAL`
- ExecutionDecisionMaker: `EDMShortCode`
- InvestmentDecisionMaker: `IDMShortCode`
- ExecutingFirm: `ExecutingFirmFirmLEI`

```
8=FIX.4.4 9=196 35=S 34=658 49=BANK 52=20200108-17:00:00.412 56=RFQHUB 54=0 60=20200108-17:00:00.409
117=e913984c-fbda-4cad-89c0-3525dee549cc 131=123456 132=64.3000 133=64.4000 423=2 537=1 136=1
137=0.0000 139=7 528=P 453=3 448=EDMShortCode 447=P 452=11 448=IDMShortCode 447=N 452=122
448=ExecutingFirmFirmLEI 447=N 452=12 10=133
```

11.4 New order multi-leg (from RFQ-hub to dealer)

Details:

- Price: `64.38`
- Side: `Client buys`
- ExecutionDestination: `XRFQ`
- ExecutionDestinationType: `Only Venue`
- ExecutionDecisionMaker: `EDMShortCode`
- UnderlyingClientId: `ClientLEI`
- OrderOriginationFirm: `OrderOriginationFirmLEI`
- TradingVenueRegulatoryTradeID: `1234` (Tvtic generated by RFQ-hub)

```
8=FIX.4.4 9=472 35=AB 34=135 49=RFQHUB 52=20200108-17:00:01.021 56=BANK 11=123456-234567 15=USD 21=3
38=600 40=D 44=64.38 54=1 55=ETF 59=0 60=20200108-17:00:01.021 63=0 117=e913984c-fbda-4cad-89c0-
3525dee549cc 167=MLEG 423=2 461=EMXXXX 528=P 660=99 20167=ETF 453=5 448=Adam Westloath 447=D 452=11
448=TEST 447=D 452=13 448=EDMShortCode 447=P 452=11 448=ClientLEI 447=N 452=3
448=OrderOriginationFirmLEI 447=N 452=13 711=1 311=GQRE UP 309=GQRE.P 305=5 308=ARCK 318=USD
810=64.365 555=1 600=GQRE 602=GQRE.P 603=5 608=EMXXXX 609=CASH 616=ARCX 624=1 556=USD 687=600
654=234567 587=0 686=2 8016=1234 10=106
```

11.5 Acknowledgment execution report (from dealer to RFQ-hub)

Details:

- Price: `64.38`
- Side: `Client buys`
- Exec type: `New`

```
8=FIX.4.4 9=200 35=8 34=851 49=BANK 52=20200108-17:00:01.236 56=RFQHUB 6=0 11=123456-234567 14=0
17=20200108_123456_0 37=20200108FTXUION5 38=600 39=0 44=64.38 54=1 55=GQRE 59=0 60=20200108-
17:00:01.021 150=0 151=600 10=97
```

11.6 Fill execution report (from dealer to RFQ-hub)

Details:

- Price: `64.38`
- Side: `Client buys`
- Exec type: `Fill`

```
8=FIX.4.4 9=220 35=8 34=852 49=BANK 52=20200108-17:00:01.239 56=RFQHUB 6=64.38 11=123456-234567 14=600
17=20200108_123456_1 31=64.38 32=600 37=20200108FTXUION5 38=600 39=2 44=64.38 54=1 55=GQRE 59=0
60=20200108-17:00:01.021 150=F 151=0 10=49
```

12 Miscellaneous

We are connected on the following FIX networks:

- ITGNET
- Fidessa
- AutEx
- ULNET
- NyFIX

Our UAT link is available 24/7.

13 Technical Contact Information

FIX team
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