Aquis Stock Exchange FIX Market Data Technical Specification

Quotes & Trade Capture Reports

August 2020

Version 1.0.4

Table of Contents

Version History

Version	Date	Comments
1.0	1 Nov 2019	Initial version
1.0.1	July 2020	Correction: Tag 64 is not a required field in the Trade Capture Report message Correction: Values returned in Tag 830 in the Trade Capture Report Message Correction: Tag 269 and Tag 270 are not required fields in Market Data Request Snapshot Full Refresh message
1.0.2	August 2020	Removal of legacy TrdTypes: 828 = 104, 105 & 106 Removal of legacy MMT Level 3.2 & Level 4.1 values Removal of legacy Z trade default if a Trade Capture message is submitted without TrdType (828) and TrdSubType (829) values. Addition of tag 528 in Trade Capture Report message
1.0.3	August 2020	TrdType (828) and TrdSubType (829) now mandatory in Trade Capture Report message
1.0.4	August 2020	Correction: Removal of tag 528 in Trade Capture Report message

1 Introduction

Aquis Stock Exchange (AQSE) will disseminate market data relating to Trade Capture reports, Quotes, market states, security suspensions/restorations and FIX participant suspensions/restorations using the FIX 4.4 protocol.

This document describes the protocol and message formats for these market data feeds.

For Continuous Trading market data, please refer to “Aquis Stock Exchange Multicast Market Data Technical Specification”.

1.1 Connectivity

AQSE offers both WAN-shaped and Gig-shaped versions of the market data feed for recipients to use depending on the nature of their connectivity to the AQSE data centres. Furthermore, AQSE offers more than one channel for receiving the market data (for example, two channels from the primary data centre for a particular data stream and a further channel for this stream from the secondary data centre).

The details of the network configuration, multicast address information and login credentials for the replay service, for both production and test feeds, will be provided by the AQSE connectivity team.

1.2 Enquiries / Support

Please contact the AQSE support team at AQSEOperationsSupport@aquis.eu for any questions relating to this document.

2 Service Description

2.1 Real Time Market Data Feed

The AQSE market data servers monitor trading activity on the system and convert these events into market data messages.

This data is anonymised, so that the messages do not include any information identifying the trading Members involved.

Quotes and Trade Capture reports are published using the following messages:

- **Trade Capture Report Request**
- **Trade Capture Request Acknowledgement**
- **Trade Capture Report**
- **Market Data Request**
- **Market Data Request Reject**
- **Market Data Request Snapshot Full Refresh**
- **Market Data Incremental Refresh**

The security identifier on Quotes and Trade Capture Reports is an ISIN. AQSE provides a security reference data file for recipients to interpret this security ID, giving information such as RIC, ISIN, currency and MIC for the security. Another reference data file is provided defining the tick tables that apply to the securities. These reference data files are made available for download pre-market open and will be updated daily to reflect securities admitted to or removed from trading and any relevant corporate actions.

As the trading status of a security changes, either due to market opening or closing or due to AQSE applying a trading halt or regulatory suspension, this update is published using a **Security Status** message.

3 Market Data Message Formats

This section provides details of the message formats used within the AQSE market data feeds. This includes message fields and descriptions.

3.1 Market Data Feed Subscription

The Market Data Feed messages allow participants to receive real-time updates on two-way pricing of the listed securities.

3.1.1 Market Data Request Message

To request Market Data Feed messages, Members must send a Market Data Request message.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = V
262	MDReqID	Y	Unique identifier. This value is not interpreted by the platform when unsubscribing. The list of securities/boards is used to determine which subscriptions to cancel.
263	Subscription RequestType	Y	Indicates to the other party what type of response is expected. A snapshot request only asks for current information. A subscribe request asks for updates as the status changes. Unsubscribe will cancel any future update messages from the counter party. AQSE supported values: 0 = Snapshot 1 = Snapshot and Updates (Subscribe) 2 = Unsubscribe
264	MarketDepth	Y	1
267	NoMDEntryTypes	Y	Number of *MDEntryType* fields requested repeating group*
269*	MDEntryType	Y	Must be the first field in this repeating group. This is a list of all the types of Market Data Entries that the firm requesting the Market Data is interested in receiving. AQSE supported values: 0 = Bid 1 = Offer 4 = Opening 5 = Closing Note: a request for Bid and Offer will always result in both being subscribed to
146	NoRelatedSym	Y	Number of securities requested.

336*	TradingSessionID	Y	EUR/ISDX-exl USD/ISDX-exl EUR/ISDX-exn GBX/ISDX-exl USD/ISDX-exn GBX/ISDX-exn GBP/ISDX-exl SEK/ISDX-exn GBP/ISDX-exn CHF/ISDX-exl NOK/ISDX-exl Note: if only the *TradingSessionId* is specified, then all instrument prices on that board will be provided in which case *NoRelatedSym* should be set to 1.
55*	Symbol	N	Not validated as AQSE uses ISIN to identify the security. AQSE supported values: [N/A]
48*	SecurityID	N	The ISIN of the security being referenced.
22*	SecurityIDSource	N	This field must always be set to the *IDSource* for ISIN. AQSE supported values: 4 = ISIN

* = repeating group

3.1.2 Market Data Request Reject Message

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = Y
262	MDReqID	Y	The ID of the associated Market Data Request message.
281	MDReqRejReason	N	Reason for rejection.

3.1.3 Market Data Request Snapshot Full Refresh Message

Note: One Market Data Request Snapshot Full Refresh message is sent for each security on each board.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = W
262	MDReqID	Y	ID of the associated Market Data Request message.
55	Symbol	Y	Will always be set to [N/A].
48	SecurityID	Y	The ISIN of the security being referenced.
22	SecurityIDSource	Y	The field must always be set to the *IDSource* for ISIN. 4 = ISIN

336	TradingSessionID	Y	AQSE supported values: EUR/ISDX-exl USD/ISDX-exl EUR/ISDX-exn GBX/ISDX-exl USD/ISDX-exn GBX/ISDX-exn GBP/ISDX-exl SEK/ISDX-exn GBP/ISDX-exn CHF/ISDX-exl NOK/ISDX-exl
268	NoMDEntries	Y	Number of entries following.
269*	MDEntryType	N	Type of Market Data entry. AQSE supported values: 0 = Bid 1 = Offer 4 = Opening 5 = Closing
270*	MDEntryPx	N	Price of the market data entry.
271*	MDEntrySize	N	Quantity of the market data entry. If *MDEntryType* (269) = Bid (0) or Offer (1)
282*	MDEntryOriginator	N	*CompID* of the Market Maker.

* = a repeating group

3.1.4 Market Data Incremental Refresh

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = X
262	MDReqID	Y	ID of the associated Market Data Request message.
268	NoMDEntries	Y	Number of entries following.
279*	MDUpdateAction	Y	Must be the first field in the repeating group. AQSE supported values: 0 = New 2 = Delete
269*	MDEntryType	N	Type of market data entry. 0 = Bid 1 = Offer 4 = Opening 5 = Closing
270*	MDEntryPx	N	Price of market data entry.
271*	MDEntrySize	N	Quantity of market data entry. If *MDEntryType* = Bid (0) or Offer (1)
282*	MDEntryOriginator	N	*CompID* of the Market Maker.
55*	Symbol	Y	Will always be set to [N/A].
48*	SecurityID	Y	The ISIN of the security being referenced.
22*	SecurityIDSource	Y	The field must always be set to the *IDSource* for ISIN.

			4 = ISIN
336*	TradingSessionID	Y	AQSE supported values: EUR/ISDX-exl USD/ISDX-exl EUR/ISDX-exn GBX/ISDX-exl USD/ISDX-exn GBX/ISDX-exn GBP/ISDX-exl SEK/ISDX-exn GBP/ISDX-exn CHF/ISDX-exl NOK/ISDX-exl

* = repeating group

3.2 Trade Report Messages

The Trade Report Feed messages allow members to receive real-time updates on Trade Reports. Members must request subscription to Trade Report Feed messages.

Trade reports fed to subscribers who did not originate the Trade Report are anonymised.

3.2.1 Trade Capture Report Request

The Trade Capture Report Request message should be used to subscribe/unsubscribe to AQSE Trade Reports.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = AD
568	TradeRequestID	Y	Identifier for the trade request.
569	TradeRequestType	Y	AQSE supported values: 0 = All trades
263	SubscriptionRequestType	N	Used to subscribe/unsubscribe to Trade Capture Reports. 1 = Snapshot + Updates, default if not supplied 2 = Unsubscribe
58	Text	N	This field is not validated by AQSE.

3.2.2 Trade Capture Report Request Acknowledgement

The Trade Capture Report Request Acknowledgement message is sent back as an acknowledgement to the Trade Capture Report Request message.

This message indicates the acceptance or rejection of the Trade Capture Report Request.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = AQ
568	TradeRequestID	Y	Identifier for the trade request.

569	TradeRequestType	Y	AQSE supported values: 0 = All trades
263	SubscriptionRequestType	N	Used to subscribe/unsubscribe to Trade Capture Reports. 1 = Snapshot + Updates 2 = Unsubscribe
749	TradeRequestResult	Y	Result of Trade Request. 0 = Successful 99 = Other
750	TradeRequestStatus	Y	Status of Trade Request. 0 = Accepted 2 = Rejected
58	Text	N	Description of error message.

3.2.3 Trade Capture Report

The Trade Capture Report Request outbound message is sent after a successful Trade Capture Report Acknowledgement has been sent.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = AE
571	TradeReportID	Y	Transaction Reference from the submitted inbound Trade Capture Report. Populated with AQSE ID (818) if receiving party is not part of submitters participant group. For cancels a C will be appended to the original.
818	SecondaryTradeReportID	N	The AQSE trade number that was generated from the submitted inbound trade capture report. Not returned on cancels.
881	SecondaryTradeReportRefID	N	When amending/cancelling a Trade Report, it is the AQSE generated identifier for the trade being amended.
487	TradeReportTransType	Y	Identifies Trade Report message transaction type. 0 = New 1 = Cancel 2 = Replace
568	TradeRequestID	N	The *TradeRequestID* from the original Trade Capture Report Request message. Only populated if being sent to the originating Market Maker.
828	TrdType	Y	Type of trade. AQSE supported values: 0 = Regular Trade (O) 38 = Large in Scale (L) 101 = Negotiated Trade in Liquid Financial Instruments 102 = Negotiated Trade in Illiquid Financial Instruments 103 = Negotiated Trade Subject to Conditions Other Than the Current Market Price

829	TrdSubType	Y	Further qualification to the trade type. AQSE supported values: 15 = B 18 = M 22 = P 26 = R 37 = X
830	TrdTypeBenchRef	N	AQSE supported values: 0 = No Benchmark or Reference Price Trade (-) 1 = Benchmark Trade (B) 2= Reference Price Trade (S)
5997	NoTradePriceConditions	N	The number of trade price conditions repeating group
5998*	TradePriceCondition	N	Indicates the conditions under which the bargain was struck. AQSE supported values: 0 = CD 1 = CR 2 = XD 3 = XR 4 = CC 5 = CP 6 = XC 7 = XP 8 = CS 9 = CB 10 = SP 11 = XB
1134	ReportedPxDiff	N	If there is a reported price difference and *TrdType* (828) and *TrdSubType* (829) are not provided, then set Trade Conditions = D.
55	Symbol	N	Will always be set to [N/A].
48	SecurityID	Y	The ISIN of the security being referenced.
22	SecurityIDSource	Y	This field will be always set to the *IDSource* for ISIN. 4 = ISIN
32	LastQty	Y	The number of shares agreed to be traded.
31	LastPx	Y	The price at which the trade was agreed in the currency specified in the board *TradingSessionID* (336).
75	TradeDate	Y	Date and time of when the transaction represented by the Trade Capture Report occurred.
60	TransactTime	N	Date and time of when the transaction represented by the Trade Capture Report occurred.
64	SettlDate	N	The date on which the trade is agreed to settle.
58	Text	Y	Populated to pass the trade source name. Only populated is being sent to the originating Market Maker.
552	NoSides	Y	Number of Side repeating group instances. 1 = One side

54*	Side	Y	Whether this trade was a buy or sell (with respect to the reporting member). 1 = Buy 2 = Sell
37*	OrderID	Y	Will be set to [N/A].
453*	NoPartyIDs	Y	Number of *PartyID* (448), *PartyIDSource* (447), and *PartyRole* (452) entries
448+	PartyID	Y	Used to identify source of *PartyID* (448). Required if the *PartyIDSource* (447) is specified Required if *NoPartyIDs* (453) >0 Only populated if being sent to the originating Market Maker, else [N/A].
447+	PartyIDSource	Y	Used to identify class source of *PartyID* (448) value (e.g. BIC). Required if *PartyID* (448) is specified. AQSE supported values: B = BIC G = MIC D = Prop code
452+	PartyRole	Y	Identifies the type of *PartyID* (448) (e.g. executing broker). Required if *NoPartyIDs* (453) >0. AQSE supported values: 1 = Executing Firm 12 = Executing Trader 17 = Contra Firm 73 = Executing Venue 44 = Order Entry Operator ID
336*	TradingSessionID	Y	The identifier of the board to which the Trade Report is being submitted. AQSE supported values: EUR/ISDX-exl USD/ISDX-exl EUR/ISDX-exn GBX/ISDX-exl USD/ISDX-exn GBX/ISDX-exn GBP/ISDX-exl SEK/ISDX-exn GBP/ISDX-exn CHF/ISDX-exl NOK/ISDX-exl

* = a repeating group
+ = a repeating group

Trade Capture Report messages are accompanied with the following MMT flags:

Tag	Description	Comments
6001	MMT Level 1	Market mechanism: 2 = Quote Driven Market
6002	MMT Level 2	Trading mode: 5 = Trade Reporting (On Exchange)
6003	MMT Level 3.1	This field is not applicable. Always set to “-“
6004	MMT Level 3.2	Transaction Type: Negotiation Indicator or Pre-trade Transparency Waiver - = No Negotiated Trade 1 = Negotiated Trade in Liquid Financial Instruments 2 = Negotiated Trade in Illiquid Financial Instruments 3 = Negotiated Trade Subject to Conditions Other Than The Current Market Price
6005	MMT Level 3.3	Transaction Type: Agency Cross Trade Indicator X = Agency Cross Trade - = No Agency Cross Trade
6006	MMT Level 3.4	Transaction Type: Modification Type - = New Trade A = Trade Amendment C = Trade Cancellation
6007	MMT Level 3.5	Transaction Type: Benchmark or Reference Price Indicator - = No Benchmark or Reference Price Trade B = Benchmark Price Trade S = Reference Price Trade
6008	MMT Level 3.6	Transaction Type: Special Dividend Indicator E = Special Dividend Trade - = No Special Dividend Trade
6009	MMT Level 3.7	Transaction Type: Off Book Automated Indicator - = Unspecified or does not apply
6010	MMT Level 3.8	Transaction Type: Ordinary/Standard Trades Outside Price Formation/Discovery Process P = Plain-Vanilla Trade
6011	MMT Level 3.9	Transaction Type: Algorithmic Indicator - = No Algorithmic Trade
6012	MMT Level 4.1	Publication Mode/Post-Trade Deferral : Reason - = Immediate Publication 2 = Non-Immediate Publication: Deferral for "Large in Scale"

		3 = Non-Immediate Publication: Deferral for "Illiquid Instrument"
6013	MMT Level 4.2	Post-Trade Deferral or Enrichment: Type: - = Not Applicable
6014	MMT Level 5	Duplicative Indicator: - = Not Applicable
6020	MMT concatenated 14 flags	A concatenated string of MMT flags 6001-6014
6050	Transaction MIC	Provides the Aquis Stock Exchange MIC for the execution: NEXL – Equity Main Board NEXD – Non-Equity Main Board NEXT – Equity MTF Trading NEXN – Non-Equity MTF Trading NEXG – Equity Growth Market NEXF – Non-Equity Growth Market

3.3 News Message

The News message is published to indicate market status updates, suspensions and restorations of a security and suspensions and restorations of a FIX participant.

Tag	Field Name	Req'd	Comments
StandardHeader		Y	MsgType = B
42	OrigTime	N	Time of message origination.
148	Headline	Y	Specifies the headline text.
146	NoRelatedSym	N	
55*	Symbol	N	Will always be set to [N/A].
48*	SecurityID	N	The ISIN of the security being referenced.
22*	SecurityIDSource	N	This field must always be set to the *IDSource* for ISIN. 4 = ISIN
33	NoLinesOfText	Y	Identifies the number of lines of text body. This is always set to 2.
58+	Text	N	News type is stated in the first line and the news description in the second.
20311	NewsStatus	N	News broadcast status. 1 = Sent

* = a repeating group
+ = a repeating group

Market state messages will be published with *Headline* (148) carrying the text "Market State Change" with *Text* (58) specifying the market state.

Security suspensions and restorations will be published with *Headline* (148) and *Text* (58) carrying the text "Suspension of Trading" or "Restoration of Trading" along with the related symbol in *SecurityID* (48).

FIX participant suspensions and restorations will be published with *Headline* (148) and *Text* (58) carrying the text “Suspension of Trading” or “Restoration of Trading” and the trader compID.