

AQSE FIX Rules of Engagement

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BUSINESS

This section has been added to explicitly state the trading and reporting models that the AQSE platform supports. For external participants, these models are supported by the FIX protocol described within this document.

MARKET MAKER QUOTING

Members may:

- Register as market makers in one or more stocks on the on-exchange boards. Such registrations oblige the market maker to publish firm, continuous, two-way quotes in at least EMS for all securities they are registered in during the mandatory quote period for the particular securities.
- Register as a Systematic Internaliser to quote in one or more stocks on the CCC/AQSE-off boards. Such registrations allow the member to publish quotes for display purposes only.

MARKET DATA DISTRIBUTION

Members may: Subscribe to receive market data from AQSE.

Trading (whether directly or via hittable quotes) on the platform is currently not supported.

PREFACE

1.1. Purpose of Document

This document provides an introduction to the FIX API. It is provided by AQSE for market participants wishing to develop applications that will interface with the FIX gateway. The document provides technical guidance on the FIX session level messages used to connect to AQSE and the application level messages including a breakdown of the FIX tags and values supported by AQSE. Protocol standard.

1.2. Document Audience

The FIX API interface is based on version 4.4 of the FIX with modifications. This is a reference document for technical staff among AQSE participants that wish to develop software that can communicate with the AQSE Trading System using the FIX gateway interface.

This Rule of Engagement document assumes that the reader has a solid working knowledge of the FIX Protocol and a reasonable familiarity with the FIX 4.4 version.

1.3. Structure of Document

The document structure is as follows:

- Overview of trading models and services available via FIX
- Supported session level messages
- Supported application level messages with detailed tables on each FIX message

Description	Reference
FIX 4.4 Specification	http://fixprotocol.org/specifications/fix4.4spec
AQSE Trading Rules	See www.AQSE.com for latest version
AQSE Connectivity Document	See www.AQSE.com for latest version
Country ISO codes	http://www.iso.org/iso/english_country_names_and_code_elements
Various csv files	Static data available via the website – see Appendix C Static Data Files

TRADING MODELS

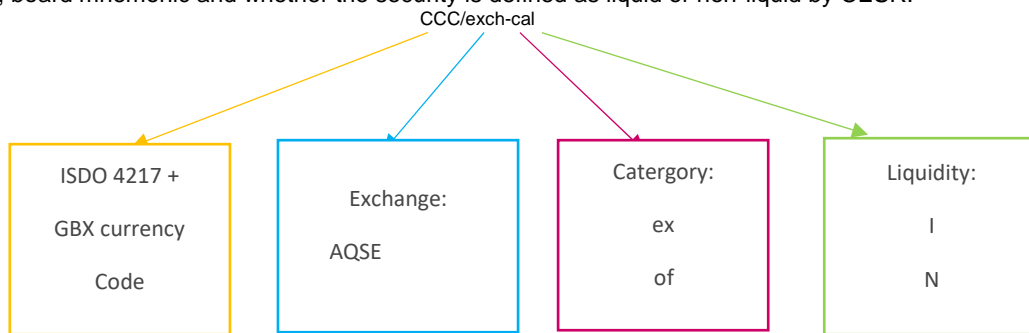
Securities on AQSE may be listed on the AQSE Main Board, the AQSE Growth Market or the AQSE Secondary Market. Transaction Interfaces are provided for Market Maker Quoting. Additionally, market participants are able to obtain information on market news.

2.1 Boards

For each AQSE security there are several possible trading boards that specify:

- Whether the trade is on-Exchange
- Whether the security is liquid or non-liquid according to the CESR
- The currency
- Exchange – AQSE

The naming convention of a board consists of the ISO currency code or GBX as applicable, exchange (AQSE), board mnemonic and whether the security is defined as liquid or non-liquid by CESR:



For example, GBP/AQSE-exl describes the on-exchange board for securities classed as liquid by CESR trading in pounds sterling. A list of boards currently used by AQSE can be found at www.AQUIS PLCexchange.com.

The AQSE board is specified within FIX by using the *TradingSessionID* <336>, for example <336>=GBX/AQSE-exn.

A board associated with a specific security is known as a SecBoard. It is therefore a combination of security and the relevant board on which it trades. A SecBoard list can be found at www.nexexchange.com.

A full list of static data available via the website can be found in Appendix C Static Data Files.

2.2 Identifying a SecBoard using FIX

A SecBoard is communicated within FIX messages using the fields listed below:

Tag Number	Tag Name	Supported Value	Description
55	Symbol	[N/A]	The Symbol field is not a requirement for AQSE as we only support ISINs. Participants should use a value of "[N/A]" as this field is not validated.
48	SecurityID	ISIN	The ISIN of a security traded on the Board specified in <i>TradingSessionID</i> .
22	SecurityIDSource	4 - ISIN	AQSE only supports identification of securities using ISINs.
336	TradingSessionID	CCC/AQSE-exn CCC/AQSE -exl CCC/AQSE -ofn CCC/AQSE -ofl CCC/AQSE -dxi	The board the security specified in SecurityID is traded on. The CCC should be replaced with the ISO currency code or GBX as applicable.

SESSION LEVEL

AQSE support a standard FIX 4.4 session. At this time there are no unique requirements.

3.1 Session Messages

AQSE supports the following session level FIX messages:

Message	Msg Type	Direction
Logon	A	Incoming/Outbound
Heartbeat	0	Incoming/Outbound
TestRequest	1	Incoming/Outbound
ResendRequest	2	Incoming/Outbound
SequenceReset	3	Incoming/Outbound
Reject	4	Outbound ONLY
Logout	5	Incoming/Outbound

3.2 User ID (CompID)

An AQSE trading system user ID is now associated with a FIX Session CompID. Each AQSE user ID is associated with an AQSE member ID, therefore participants with 2 AQSE member IDs must have 2 FIX sessions for example.

Participant connections are tied to a specific IP address and port number combination – no password authentication is needed.

The following Logon message is supported:

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = A	
98	EncryptMethod	Y	Int	Always unencrypted	0
108	HeartbtInt	Y	Int	Same value used by both sides	
StandardTrailer		Y			

3.3 FIX Addressing Tags NOT Supported by AQSE

The FIX identification fields shown below are not supported and should not be used at present. If they are sent on messages inbound to AQSE, they will not be returned on subsequent outbound messages.

Tag number	Tag name
50	SenderSubID
142	SenderLocationID
57	TargetSubID
143	TargetLocationID
115	OnBehalfOfCompID
116	OnBehalfOfSubID
144	OnBehalfOfLocationID
128	DeliverToCompID

129	DeliverToSubID
145	DeliverToLocationID

3.4 Failover

AQSE provides a primary and a secondary FIX gateway. Each FIX gateway has the capacity to support all FIX connections in the event of a failure. In the event of a loss of the primary FIX gateway, the market participant must connect to the secondary FIX gateway.

When connecting to the AQSE secondary FIX gateway, participants should note that the state of a FIX session is NOT shared between the two gateways.

When an unsolicited disconnect on the Primary Gateway occurs Participants should wait 30 seconds before attempting to connect to the Secondary Gateway (during this time they may wish to try and reconnect to the Primary in the case of a temporary line glitch). When attempting to connect to the secondary the client should set their sequence number to 1 and ResetSeqNumFlag (141) to Y. If the login request to the secondary is rejected the Participant should wait 5 seconds before trying again. If the second login attempt fails the Participant should wait another 5 seconds before retrying – if this fails the Participant should contact the AQSE Service Desk.

Market makers must note that when a FIX session is disconnected quotes will automatically be withdrawn, and therefore need to be re-submitted.

Attempts to connect to the secondary FIX gateway outside of a failover scenario will be refused.

APPLICATION LEVEL

The application level messages consist of FIX 4.4 with AQSE custom messages. The application level tags are based on FIX 4.4.

AQSE application level messages are split up into 3 categories which are:

- Market Maker Quoting
- Market Data

4.1.1.1 Trade Price Conditions

If the trade price in *LastPx* <31> differed from the prevailing market price at time of execution, then the trade must be identified as having a price difference by setting the *ReportedPxDiff*<1134>="Y".

If one or more specific trade conditions existed that caused the price difference then these should be specified using The *TradePriceConditions* <5998> Repeating group.

NoTradePriceConditions <5997> is set to the number of trade price conditions that caused the price difference. There is one *TradePriceCondition* <5998> provided for each applicable trade price condition.

Note that if you have indicated that there is a *ReportedPxDiff* <1134>="Y" but have not sent a *TradePriceCondition* <5998> then the Price Condition will default to D.

The following outlines the trading price conditions.

FIX value <5998>	Mnemonic	Description
0	CD	Special cum dividend
1	CR	Special cum rights
2	XD	Special ex dividend
3	XR	Special ex rights
4	CC	Special cum coupon
5	CP	Special cum capital repayments
6	XC	Special ex coupon
7	XP	Special ex capital repayments
8	CS	Cash settlement
9	CB	Special cum bonus

4.1.1.2 Deferred Publication

The AQSE trading system will automatically delay the publication of trades that qualify for deferred publication under MiFIDII. The duration of the delay is calculated using the ADT value for the relevant security and the consideration.

A trade qualifies for deferred publication if:

- The consideration of the trade meets the size criteria as per the AQSE Trading Rules

- The transaction is between a member dealing on own account with a client:
 - *OrderCapacity* <528> must be P, and
 - *TrdSubType* <829> must not be 18 (Marketmaker to (Cross Trade), 26 (Riskless Principal).Marketmaker), 37.

Note: AQSE will use the latest updates on ADT/SMS values from the CESR website and daily currency updates from the European Central website in its calculations.

Reporting members may instruct the trading system to immediately publish trades that would otherwise be delayed by setting *TradePublishIndicator* <1390> to “1”.

4.1.1.3 Parties Block

The trade capture report states that the *NoPartyIDs* <453> when submitting a trade should always be set to the value of 2. This is because the first repeating group should identify the counterparty and the second the venue. The values used to identify the counterparty can be found below:

Field	Value
Party ID <448>	<p>If the counterparty is an AQSE member send the AQSE firm ID</p> <p>If the counterparty is an investment firm that is an LSE member send the LSE member ID for the member</p> <p>If the counterparty is an investment firm that is neither an AQSE nor LSE member send the Bank Identifier Code (BIC, ISO 9362)</p> <p>If the counterparty/client is not an investment firm, the client should be identified using the code “CLIENT”</p>
Party ID Source <447>	B = BIC Code
Party Role <452>	17 = ContraFirm

The party ID sent depends on whether the counterparty is a member or not.

The trade must occur on one of the following venues:

- Anonymous Systematic Internaliser
- Over the Counter
- Recognised Systematic Internaliser
- AQSE

Note that the above venues are only applicable to certain AQSE boards. The values used to identify the venue are illustrated below:

Anonymous Systematic Internaliser

Field	Value
Party ID <448>	SI
Party ID Source <447>	B = BIC Code
Party Role <452>	73 = Executing Venue

OTC (Over the Counter)

Field	Value
Party ID <448>	OTC
Party ID Source <447>	B = BIC Code
Party Role <452>	73 = Executing Venue

Recognised Systemic Internaliser

Field	Value
Party ID <448>	Bank Identifier Code (BIC, ISO 9362)
Party ID Source <447>	B = BIC Code
Party Role <452>	63 = Systemic Internaliser

Executed on AQSE

Field	Value
Party ID <448>	"AQSE"

Party ID Source <447>	G = MIC
Party Role <452>	73 = Executing Venue

4.1.2 Trade Cancellation

Trades on the AQSE trading system may be cancelled by the user for up to five business days from the day on which the trade was reported. After this time the AQSE regulation department must be contacted in order to cancel the trade.

Trade cancellations require a *TradeCaptureReport* message to be sent with the *TradeReportTrans Type* <487> = "1" (Cancel) and the *SecondaryTradeReportRefID* <881> set to the trading system generated identifier (*SecondaryTradeReport ID* <818>) that was returned in the (*TradeCaptureReportAck*) message in response to the original trade submitted.

A *TradeCaptureReportAcknowledgement* message will be returned by the trading system that indicates whether the cancellation request was successful.

4.1.3 Trade Amendments

Trades on the trading system may be amended by the user for up to five business days from the day on which the trade was reported. After this time the AQSE regulation department must be contacted to amend the trade.

Trades are amended by sending a Trade Capture Report message with the required amendments, *TradeReportTransType* <487> = "2" (Replace) and the *SecondaryTradeReportRefID* <881> populated with the trading system trade identifier (*SecondaryTrade ReportID*<818>). The system will then:

- cancel the original trade and
- issue a new trade report with a new trading system-generated trade identifier

A *TradeCaptureReportAcknowledgement* message will be returned by the trading system that will indicate whether the amendment request was successful.

4.1.4 Trade Capture Report Acknowledgment

The *TradeCaptureReportAcknowledgement* message is sent as a response to the *TradeCaptureReport* new, cancel and amendment messages submitted by AQSE members to report trades.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = AR	
571	TradeReportID	Y	String	Unique identifier for the Trade Capture Report	
487	TradeReportTransType		Int	Identifies Trade Report message transaction type	0 = New 1 = Cancel 2 = Replace

828	TrdType		Int		<p>0 = Regular Trade (O) 38 = Large in scale (L)</p> <p>101 = Negotiated Trade in Liquid Financial Instruments</p> <p>102 = Negotiated Trade in Illiquid Financial Instruments</p> <p>103 = Negotiated Trade Subject to Conditions Other Than The Current Market Price</p> <p>104 = Pre-Trade Transparency Waiver for Illiquid Instruments (ILQD - RTS 1 & 2)</p> <p>105 = Pre-Trade Transparency Waiver for Above Standard Market Size on an SI (SIZE - RTS 1)</p> <p>106 = Pre-Trade Transparency Waivers of ILQD and SIZE</p>
829	TrdSubType		Int		<p>15 = B</p> <p>18 = M</p> <p>22 = P</p> <p>26 = R</p> <p>37 = X</p>
830	TrdTypeBenchRef		Int		<p>- - No Benchmark or Reference Price Trade</p> <p>B - Benchmark Trade</p> <p>S - Reference Price Trade</p>
939	TrdRptStatus		Int	Status of Trade Report	<p>0 = Accepted</p> <p>1 = Rejected</p>
751	TradeReportRejectReason		Int	Reason for Rejection of Trade Report	<p>2 = Unknown Instrument</p> <p>4 Invalid Trade Type</p> <p>99 = Other</p> <p>100 Duplicate TradeReportID</p>
818	SecondaryTradeReportID		String	AQSE Trade Report ID	

48	SecurityID	Y	String	The ISIN of the security being referenced	
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22	SecurityIDSource	Y	String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN
60	TransactTime		UTCTimestamp	Time ACK was issued by matching system, trading system or counterparty	
58	Text		String	May be used by the executing market to record any execution details that are particular to that market	
336	TradingSessionID	Y	String	Echoed back from the trade capture report	CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn CCC/AQSE-ofl
StandardTrailer		Y			

4.2. Market Maker Quoting

Members may:

- Register as market makers in one or more stocks on the on-exchange boards. Such registrations oblige the market maker to publish firm, continuous, two-way quotes in at least EMS for all securities they are registered in during the mandatory quote period for the particular securities.
- Register as a Systematic Internaliser to quote in one or more stocks on the CCC/AQSE-ofl boards. Display purposes only. Such registrations allow the member to publish quotes for AQSE supports the mass quote message to submit quotes. A quote acknowledgement is then sent from AQSE. To amend a quote the same message should be used, which will automatically replace the existing quote.

4.2.1. Mass Quote

The *MassQuote* message is used by AQSE market makers to submit two sided quotes into the market. Two sided quotes for multiple securities can be submitted at the same time. The trading system validates each Bid and Ask and if either is invalid, the entire quote for that security is rejected.

Tag	Name	Req	Data Type	Desc	Supported Values		
StandardHeader		Y		MsgType = i (lowercase)			
117	QuoteID	Y	String	The QuoteID is required to identify the Mass Quote and will be used as a reference on the response Mass Quote Acknowledgement message. The field will be prepended to the QuoteEntryID as the internal reference. A maximum of 50			
301	QuoteResponseLevel		Int	If omitted then the quotes will be acknowledged. If this field is provided then only errors will be acknowledged.	1 = Acknowledge rejected quotes only		
296	NoQuoteSets	Y	NumInGroup	AQSE currently supports 1 quote set. Always set to 1	1		
◆	302	QuoteSetID	Y	String	Unique identifier for the quote set - Maximum of 16 characters	This is not validated by AQSE	
◆	304	TotNoQuoteEntries		Int			
◆	893	LastFragment		Boolean		N = Message is continued Y = Last message	
◆	295	NoQuoteEntries	Y	NumInGroup			
◆	◆	299	QuoteEntryID	Y	String	This is not validated by AQSE	
◆	◆	55	Symbol		String	Not validated as AQSE uses ISIN to identify the security	[N/A]
◆	◆	48	SecurityID	Y	String	The ISIN of the security being referenced	
◆	◆	22	SecurityIDSource	Y	String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN
◆	◆	132	BidPx	Y	Price		
◆	◆	133	OfferPx	Y	Price		
◆	◆	134	BidSize	Y	Qty		
◆	◆	135	OfferSize	Y	Qty		
◆	◆	60	TransactTime		UTCTimestamp		
◆	◆	336	TradingSessionID	Y	String		CCC/AQSE- exn CCC/AQSE- exl CCC/AQUIS PLC Exchange- ofn
StandardTrailer		Y					

4.2.2. Mass Quote Acknowledgement

MassQuoteAcknowledgement message is sent in response to a *MassQuote* message.

In the event of a reject the AQSE trading system returns the reject reason in tag <58> with any individual quote detail in tag <368>.

Tag	Name		Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = b (lowercase)	
117	QuoteID	Y	String	Required when acknowledgment is in response to a Quote message	
297	QuoteStatus	Y	int	Status of the mass quote acknowledgement	0 = Accepted 1 = Cancel for SecurityID 4 = Cancel All 5 = Rejected 100 = Partially Accepted
300	QuoteRejectReason		int	Reason Quote was rejected	99 = Other
301	QuoteResponseLevel		int	Level of Response requested from receiver of quote messages. Echoed back to the counterparty.	1 = Acknowledge rejected quotes only
58	Text		String	Description of error message if failed	
296	NoQuoteSets		NumInGroup		
◆ 302	QuoteSetID		String		
◆ 304	TotNoQuoteEntries		int		
◆ 893	LastFragment		Boolean		N = Message is continued Y = Last message
◆ 295	NoQuoteEntries		NumInGroup		
◆ 299	QuoteEntryID		String		
◆ 55	Symbol		String	Will always be set to "[N/A]"	[N/A]
◆ 48	SecurityID		String	The ISIN of the security being referenced	
◆ 22	SecurityIDSource		String	This field will always be set to the IDSource for ISIN ("4")	4 = ISIN
◆ 132	BidPx		Price		
◆ 133	OfferPx		Price		
◆ 134	BidSize		Qty		
◆ 135	OfferSize		Qty		
◆ 60	TransactTime		UTCTimestamp	Time	

Tag	Name	Data Type	Desc	Supported Values
				5 = Rejected 100 = Bid Rejected, Ask Accepted 101 = Ask Rejected, Bid Accepted
◆ 368	QuoteEntryRejectReason	int		1 = Unknown SecurityID 2 = Exchange Closed 4 = Too late to enter 8 = Invalid Price 9 = Not authorised 99 = Other 112 = Invalid Quantity 115 = Invalid due to market maker protection 116 = Security suspended 117 = Security withdrawn
StandardTrailer		Y		
◆ 336	TradingSessionID	Y String	The identifier of the board to which the price quote is being submitted.	CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn
◆ 1167	QuoteEntryStatus	int		0 = Accepted

4.2.3. Quote Cancel

The *QuoteCancel* message is used by an originator of quotes to cancel quotes.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader			Y	MsgType = Z	
117	QuoteID	Y	String		
298	QuoteCancelType	Y	int	Identifies the type of Quote Cancel request.	1 = Cxl Sym 4 = Cancel all quotes
336	TradingSessionID	Y	String		CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn QSE CCC/AQUIS PLC Exchange-
295	NoQuoteEntries		NumInGroup		
◆ 55	Symbol		String	Not validated as AQSE uses ISIN to identify the security	[N/A]
◆ 48	SecurityID		String	The ISIN of the security being referenced	
◆ 22	SecurityIDSource		String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN

StandardTrailer	Y			
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4.2.4. Quote Status Report

The *QuoteStatusReport* message is sent as a response to a *QuoteCancel*.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = AI	
117	QuoteID	Y	String		
336	TradingSessionID	Y	String	Echoed back from the mass quote	CCC/AQSE- exn CCC/AQSE-exl CCC/AQUIS PLC Exchange-ofn
55	Symbol		String	Will always be set to "[N/A]"	[N/A]
48	SecurityID		String	The ISIN of the security being referenced	
22	SecurityIDSource		String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN
54	Side		Char		This field is never used by AQSE.
60	TransactTime		UTCTimestamp		
297	QuoteStatus		int	Quote Status	0 = Accepted 5 = Rejected 100 = Partially Accepted (note – only reason for rejection is no active quote found - no indication of which failed is given as outcome will be that all active Quotes covered will have been cancelled
58	Text		String	Description of error message if failed	
StandardTrailer		Y			

Note: at end of Open period any open quotes will be pulled by the system (unless the participant is configured otherwise) and will result in a series of Quote Status Report messages.

MARKET DATA

4.3.1. News Broadcast

News provides information on securities and the market using a *News* message. Participants do not need to request subscription to *News* messages.

4.3.1.1. News

This is an outbound message provided automatically:

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = B	
42	OrigTime		UTCTimestamp	Time of message origination	
148	Headline	Y	String	Specifies the headline text	
146	NoRelatedSym		NumInGroup		
◆ 55	Symbol		String	Will always be set to "[N/A]"	[N/A]
◆ 48	SecurityID		String	The ISIN of the security being referenced	
◆ 22	SecurityIDSource		String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN
33	NoLinesOfText	Y	NumInGroup	Identifies number of lines of text body. This is always set as 2	2
◆ 58	Text	Y	String	News type is stated in one text and the news description is stated in the other.	
149	URLLink		String	A URL (Uniform Resource Locator) link to additional information (i.e. http://www.XYZ.com/research.html)	
20311	NewsStatus		Int	News broadcast status	1 = Sent
StandardTrailer		Y			

4.3.2. Market Data Feed

The *Market Data Feed* messages allow participants to receive real-time updates on two- way pricing. Participants must request subscription to *Market Data Feed* messages.

4.3.2.1. Market Data Request

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = V	
262	MDReqID	Y	String	Unique identifier	Note: this value is not interpreted by the platform when unsubscribing. The list of securities/boards is used to determine which subscriptions to cancel.
263	SubscriptionRequestType	Y	Char	SubscriptionRequestType 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.	0 = Snapshot 1 = Snapshot + Updates (Subscribe) 2 = Unsubscribe
264	MarketDepth	Y	Integer		1
267	NoMDEntryTypes	Y	Integer	Number of MDEntryType fields requested.	
◆	269 MDEntryType	Y	Integer	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.	0 = Bid 1 = Offer 4 = Opening 5 =Closing Note: a request for Bid or Offer will always result in both being subscribed to.
146	NoRelatedSym	Y	Integer	Number of symbols (instruments) requested.	
◆	336 TradingSessionID	Y	String	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	Valid board in format CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn CCC/AQSE-ofl ...

Tag	Name	Req	Data Type	Desc	Supported Values
◆ 55	Symbol			Not validated as AQSE uses ISIN to identify the security	[N/A]
◆ 48	SecurityID		String	The ISIN of the security being referenced	
◆ 22	SecurityIDSource		String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN
StandardTrailer		Y			

4.3.2.2. MarketDataRequestReject

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = Y	
262	MDReqID	Y	String	The ID of previous Market Data Request	
281	MDReqRejReason		String	Reason for rejection	
StandardTrailer		Y			

4.3.2.3. MarketDataRequestSnapshotFullRefresh

Note: One MarketDataRequestSnapshot message is sent for each security on each board.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = W	
262	MDReqID	Y	String	ID of previous Market Data Request	
55	Symbol	Y		Will always be set to "[N/A]"	[N/A]
48	SecurityID	Y	String	The ISIN of the security being referenced	
22	SecurityIDSource	Y	String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN

336		TradingSessionID	Y	String		Valid board in format CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn CCC/AQSE-ofl
268		NoMDEntries	Y	Integer	Number of entries following.	
◆	269	MDEntryType	Y	Integer	Type Market Data entry	0 = Bid 1 = Offer 4 = Opening 5 = Closing
◆	270	MDEntryPx	Y	Price	Price of the Market Data Entry.	
◆	271	MDEntrySize	N	Qty	If MDEntryType = Bid(0) or Offer(1)	
◆	282	MDEntryOriginator	N		CompID of Market Maker	
StandardTrailer			Y			

4.3.2.4. MarketDataIncrementalRefresh

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = X	
262	MDReqID	Y	String	ID of previous Market Data Request	
268	NoMDEntries	Y	Integer	Number of entries following.	
◆	279	MDUpdateAction	Y	Char	Must be first field in this repeating group. 0 = New 2 = Delete
◆	269	MDEntryType		Integer	Type Market Data entry 0 = Bid 1 = Offer 4 = Opening 5 = Closing
◆	270	MDEntryPx		Price	Price of the Market Data Entry.
◆	271	MDEntrySize	N	Qty	If MDEntryType = Bid(0) or
◆	282	MDEntryOriginator	N		If MDEntryType = Bid(0) or
◆	55	Symbol	Y		Will always be set to "[N/A]" [N/A]
◆	48	SecurityID	Y	String	The ISIN of the security being referenced
◆	22	SecurityIDSource	Y	String	This field must always be set to the IDSource for ISIN ("4") 4 = ISIN
◆	336	TradingSessionID	Y	String	Valid board in format CCC/AQSE-exn CCC/AQSE-exl CCC/AQSE-ofn CCC/AQSE-ofl ...

StandardTrailer	Y			
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4.3.3. Trade Report Feed

The *Trade Report Feed* messages allow participants to receive real-time updates on Trade Reports. Participants must request subscription to *Trade Report Feed* messages.

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

4.3.3.1. Trade Capture Report Request

The following message should be used to subscribe/unsubscribe to AQSE trade reports.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = AD	
568	TradeRequestID	Y	String	Identifier for the trade request	
569	TradeRequestType	Y	Int		0 = All Trades
263	SubscriptionRequestType		Char	Used to subscribe / unsubscribe for trade capture reports.	1 = Snapshot + Updates 2 = Unsubscribe
58	Text		String		
StandardTrailer		Y			

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = AQ	
568	TradeRequestID	Y	String	Identifier for the trade request	
569	TradeRequestType	Y	int		0 = All Trades
263	SubscriptionRequestType		char	Used to subscribe / unsubscribe for trade capture reports If the field is absent, the value 1 will be the default	1 = Snapshot + Updates
749	TradeRequestResult	Y	int	Result of Trade Request	0 = Successful 99 = Other
750	TradeRequestStatus	Y	int	Status of Trade Request	0 = Accepted 2 = Rejected
58	Text		String	Description of error message	
StandardTrailer		Y			

4.3.3.2. Trade Capture Report Request Acknowledgement

The following message is sent back as an acknowledgement to the *TradeCaptureReportRequest*.

The *TradeCaptureRequestAcknowledgement* message indicates the acceptance or rejection of the *TradeCaptureReportRequest*.

4.3.3.3. Trade Capture Report – Outbound message for subscription

AQSE will send the following *TradeCaptureReport* outbound message after a successful *TradeCaptureReportAcknowledgement* has been sent.

Tag	Name	Req	Data Type	Desc	Supported Values
StandardHeader		Y		MsgType = AE	
571	TradeReportID	Y	String	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 original
818	SecondaryTradeReportID		String	The AQSE trade number that was generated from the submitted inbound trade capture report	Not present on cancels
881	SecondaryTradeReportRefID		String	When amending/cancelling a trade report it is the AQSE-generated identifier for the trade being amended.	
487	TradeReportTransactionType	Y	Int	Identifies Trade Report message transaction type	0 = New 1 = Cancel 2 = Replace
568	TradeRequestID			The TradeRequestID from the original TradeCaptureReportRequest	Only populated if being sent to originating Market Maker

828	TrdType		Int	Type of trade. Refer to the TrdType and TrdSubType mapping in section 4.1. Absence of trade type and TrdSubType defaults to a Z Trade	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 104 = Pre-Trade Transparency Waiver for Illiquid Instruments (ILQD - RTS 1 & 2) 105 = Pre-Trade Transparency Waiver for Above Standard Market Size on an SI (SIZE - RTS 1) 106 = Pre-Trade Transparency Waivers of ILQD and SIZE
829	TrdSubType		Int	Further qualification to the trade type. Refer to the TrdType and TrdSubType mapping in section 4.1. Absence of trade type and TrdSubType defaults to a Z Trade	15 = B 18 = M 22 = P 26 = R 37 = X
830	TrdTypeBenchRef		Int		- - No Benchmark or Reference Price Trade B - Benchmark Trade S - Reference Price Trade
5997	NoTradePriceCondition		NumInGroup		

◆	5998	TradePriceCondition		Int	Indicates the conditions under which the bargain was struck	0 = CD 1 = CR 2 = XD 3 = XR 4 = CC 5 = CP 6 = XC 7 = XP 8 = CS 9 = CB 10 = SP 11 = XB
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Tag	Name	Req	Data Type	Desc	Supported Values	
1134	ReportedPxDiff		Boolean	If there is a reported price difference and Trade Type(828) and Trade Sub Type(829) are not provided, then set trade Conditions="D"		
55	Symbol		String	Will always be set to "[N/A]"	[N/A]	
48	SecurityID	Y	String	The ISIN of the security being referenced		
22	SecurityIDSource	Y	String	This field must always be set to the IDSource for ISIN ("4")	4 = ISIN	
32	LastQty	Y	Qty	The number of securities agreed to be traded		
31	LastPx	Y	Price	The price at which the trade was agreed in the currency specified in the board (336)		
75	TradeDate	Y	LocalMktDate			
60	TransactTime	Y	UTCTimestamp	Date and Time of when the transaction represented by this Trade Capture Report occurred		
64	SettlDate	Y	LocalMktDate	The date on which the trade is agreed to settle.		
58	Text		String	Used to pass the trade source name	Only populated if being sent to originating Market Maker	
552	NoSides	Y	NumInGroup	Number of Side repeating group instances	1 = One Side	
◆	54	Side	Y	char	Whether this trade was a buy or sell (with respect to the reporting member).	1 = Buy 2 = Sell
◆	37	OrderID	Y	String	Will be set to {N/A}	[N/A]
◆	453	NoPartyIDs	Y	NumInGroup	Number of PartyID (448), PartyIDSource (447), and PartyRole (452) entries	
◆	448	PartyID	Y	String	Used to identify source of PartyID. Required if PartyIDSource is specified. Required if NoPartyIDs > 0	Only populated if being sent to originating Market Maker else [N/A]

◆	447	PartyIDSource	Y	char	Used to identify class source of PartyID value (e.g. BIC). Required if PartyID is specified.	B = BIC G = MIC D = Prop Code
◆	452	PartyRole	Y	Int	Identifies the type of PartyID (e.g. Executing Broker). Required if NoPartyIDs > 0	1 = Executing Firm 12 = Executing Trader 17 = Contra Firm 73 = Executing Venue 44 = Order Entry Operator ID

Tag	Name	Req	Data Type	Desc	Supported Values	
◆	336	TradingSessionID	Y	String	The identifier of the board to which the trade report is being submitted.	CCC/AQSE- exn CCC/AQSE-exl CCC/AQUIS PLC Exchange-ofn
779	LastUpdateTime			UTCTimestamp	Timestamp of last update to data item (or creation if no updates made since creation)	Only populated if being sent to originating Market Maker
381	GrossTradeAmt			Amt	Total amount traded (e.g. CumQty (4) * AvgPx (6)) expressed in units of currency	Only populated if being sent to originating Market Maker
20309	TradePublishTime			TZTimestamp		
20310	TradePublishStatus			Int	Informs us whether market information is to be released, held, etc, or whether it has already been released to the market place	1 = Not matched 2 = No delay 3 = Delayed 4 = Sent 5 = Released 6 = Lapsed
20321	LateCancelIndicator			Boolean	Indicates if trade was cancelled after five days	Y = If trade was cancelled in the last 5 days N
20332	TradeReportTime			UTCTimestamp	The time at which this trade was received by AQSE trading engine	
StandardTrailer		Y				

FIX Field	Description
6001	MMT Level 1
6002	MMT Level 2

6003	MMT Level 3.1
6004	MMT Level 3.2
6005	MMT Level 3.3
6006	MMT Level 3.4
6007	MMT Level 3.5
6008	MMT Level 3.6
6009	MMT Level 3.7
6010	MMT Level 3.8
6011	MMT Level 3.9
6012	MMT Level 4.1
6013	MMT Level 4.2
6014	MMT Level 5
6020	MMT concatenated 14 flags
6050	Transaction MIC

*Market Model Typology v3.04 (<https://www.fixtrading.org/packages/mmt-initiative-mapping-matrix-v3-04/>)

MESSAGE THROTTLING

AQSE throttles incoming message rates on a per Participant basis these limits are defined by AQSE Exchange and take into account factors such as Market Maker obligations and reasonably expected incoming message rates.

Throttle rates are per second and the default is 30 messages p/s. If a client breaches this limit they will receive a business level reject with the text 'Throttle limit exceeded' for every message sent in over the limit until the next second is reached and the counter reset.

APPENDIX A: SUPPORTED NEWS FORMAT

The following detail will be provided via the FIX News message:

News Type	Valid Types First FIX Text field(58)	Message detail Second FIX Text field(58)	Headline FIX Headline field(148)	Comment	Item that a Market Data vendor should Publish?
Market State	Available Pre-Open Open Pre-Close Close Suspended	Free format text – only used to describe the reason if the market is suspended.	“Market State Change”	A message is published at each of the points during the day where the market state changes (see Appendix B).	
Suspend/ Restore (Security)	Suspension of Trading Restoration of Trading	Free format text	Free format text	ISIN is specified in security fields	PUBLISH If applicable to AQSE Exchange Growth Market and AQSE Exchange Main Board
Suspend/ Restore (Participa nt)	Suspension of Trading Restoration of Trading	firmcode (found in web- firm.csv)	firmname (found in web- firm.csv)		PUBLISH If applicable to AQSE Growth Market and AQSE Main Board only
Market Message	Admission of Security to Trading Admission to Corporate Advisor Membership Admission to Broker Dealer Membership New AQSE Exchange Members Resignation of AQSEMembers General	Free format text	Free format text	If applicable to a security then AQSE Growth Market and AQSE Exchange Main Board issuers only	PUBLISH If applicable to AQSE Exchange Growth Market and AQSE Exchange Main Board only Others can go to general news area
Company Event	Final Results Interim Results Annual General Meeting	Free format text	Free format text	AQSE Growth Market and AQSE Main Board issuers only	
Corporat e Actions	Dividend Entitlement Issue Capitalisation Issue Sub/Consol/Reorg	Free format text	Free format text	AQSE Growth Market and AQSE Main Board issuers only	
X Marker	CR - Cum Rights CD - Cum Dividend	Empty	X Marker		

News Type	Valid Types First FIX Text field(58)	Message detail Second FIX Text field(58)	Headline FIX Headline field(148)	Comment	Item that a Market Data vendor should Publish?
	CL - Cum Liquidation Distribution CO - Cum Entitlement/Open Offer CB - Cum Capitalisation/Bonus CS - Cum Stock Distributio n CP - Cum Repayment of Capital. CI - Cum Interest XR - Ex-Rights XD - Ex- Dividend XL - Ex-Liquidation Distribution XO - Ex- Entitlement/Open Offer XB - Ex- Capitalisation/Bonus XS - Ex-Stock Distribution XP - Ex- Repayment of Capital. XI - Ex-Interest				
Bid Marker	BM – Bid Marker BO – Bid Marker has been removed	Empty	Bid Marker		

APPENDIX B: MARKET TIMETABLE

Period Name	Start Time	Price Quoting	Trade Reporting	Description
Available - Reference Data available on website	05:00			Publication of AQSE Reference Data to data vendors and participants. Platform available for connection only.
Pre-Open	07:15	Y	Y	The first period during which market makers may report trades and optionally post indicative quotations.
Open	08:00	Y	Y	At 08:00 the platform will transmit opening prices. The platform will also transmit any qualifying trades deferred (from band 3 of Table 3 – see the Trading Guidance page on the website) if agreed after 14:30 of yesterday. Mandatory quote period: The period during which market makers are obliged to display firm two-way prices for securities in which they are registered in accordance with the trading rules. Market makers may report trades.
Pre-Close	16:30	Y	Y	At 16:30 the platform will: transmit a market state change message transmit closing prices. cancel any open quotes Optionally further indicative quotes may be submitted. Market makers may continue to report trades

Close	17:15			At 17:15 the platform will transmit any qualifying deferred trades (from bands 1, 2, 3 <i>[if agreed before 14:30]</i> , 4, 5 or 6 (see the Trading Guidance page on the website). No further Trades or Quotes can be submitted.
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APPENDIX C: STATIC DATA FILES

The following table describes the format of the static data files available on the website at www.AQSE.com.

Note: the format of these has been maintained from past platforms and so not all codes are currently used but are still provided.

Type	File Name	Field	Description
Boards	web_board.csv	1. board	Code for the board (used in TradingSessionID FIX field 336)
		2. boardname	Descriptor of ON or OFF exchange
		3. boardname	Name of board
Currency	web_currency.csv	1. id	3 letter currency code
		2. name	Currency description
Firm ComplDs	web_firm_compids	1. compid	Code used by participant to establish FIX connection (all test compids start with T-)
		2. firm	Unique ID for firm that owns these compids
		3. firmcode	Code for firm that owns these compids
Participants	web_firm.csv	1. firm	Unique ID for firm
		2. firmcode	Code for firm
		3. firmname	Name of participant
		4. firmshortname	AQSE internal code
		5. firmtype	MKMK identifies Market Makers ISSR identifies Issuer
		6. firmclass	Name of firm type
		7. firmstatus	Not used
		8. isvisible	Not used

		9. domicilecountry	2 letter country code
Instruments	web_instr.csv	1. instr	Code of instrument
		2. instrname	Name of instrument
		3. secclass	Equity Debt Forex Index
		4. contractsize	Always 1

Type	File Name	Field	Description
		5. market	EQTY identifies Equity market FINC identifies Fixed Income market
		isclearinghousecleared	true/false (t/f)
		numofsettlementdays	No of settlement days
		negdealbreakclause	Not used
		9. finalpaymentoffset	Not used
Market maker Registrations	web_mmobligation.csv	1. secocode	Code for security
		2. board	Code for the board
		3. mmgroup	Market Maker group
		4. firmcode	Code for firm
		5. firm	Unique ID for firm
		6. status	Not used
Tick Sizes	PLUSticksizesFNL.csv	1. board	Code for the board
		lower_band(1-6)	Start point for band
		tick_size(1-6)	Tick size for that band
Secboard level Tick Sizes	web_PLUSticksizesFNL_secboard.csv	1. board	Code for the board
		2. isin	isin
		3. lower_band(1-6)	Start point for band
		4. tick_size(1-6)	Tick size for that band
Secboards	Web_secboard.csv	5. secocode	Code for security
		6. board	Code for the board

		7. secname	Name of security
		8. secshortname	AQSE internal code
		9. issuercode	Issuer Firm code
		10. issuer	Issuer Firm unique ID
		11. listingtype	PLPR identifies AQSE Growth Market PLPL identifies AQSE Main Board PLPM identifies AQSE Fixed Income PLSL identifies AQSE Secondary Market PLSU identifies AQSE Secondary Market (AIM)

Type	File Name	Field	Description
		12. sector	AQSE internal code
		13. market	Code for market
		14. secclass	Code for instrument class
		15. instr	Code for instrument
		16. currency	Currency code
		17. isin	ISIN security identifier
		18. istradeable	Valid for trading
		19. pricdecimals	Maximum number of decimals in prices
		20. secboardstate	Not used - A indicates active
		21. inheritedstate	A indicates active W indicates withdrawn S indicates suspended
		22. quotebases	Not used at present
		23. largeinscale	Used for determining deferred publication
		24. averagedailyturnover	Average daily turnover (CESR)
		25. exchangemarketsize	Used to validate minimum size
		26. closepriceyesterday	Shows close price for yesterday
		27. volumeyesterday	Shows volume for yesterday
		28. standardmarketsize	Standard Market Size (CESR)
		29. low52week	52 week low
		30. high52week	52 week high
Securities	web_sec.csv	1. seccode	Code for security
		2. name	Name of security
		3. shortname	AQSE internal code
		4. mainboard	Main board

Type	File Name	Field	Description
		5. instr	Instrument type
		6. isin	ISIN security code
		7. origincountry	2 letter country code
		8. currency	3 letter currency code
		9. quotebases	Not used at present
		10. issuedqty	Populated for AQSE companies

