



Saxo Prime API – Rules Of Engagement

USER GUIDE

Functional Document

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1 DOCUMENT PROPERTIES

1.1 PURPOSE OF THIS DOCUMENT

This document contains an overview of the Financial Information Exchange (FIX) services offered by Saxo Group (hereafter referred to as, "Saxo") on its Saxo Prime API Offering.

Consult this document to understand the technical aspects of implementing FIX, how to connect and use the Prime FIX server (hereafter referred to as, "the Server").

As we continue, please note:

- Saxo's Prime API server is FIX 4.4 compliant. Both the client and Saxo Group must support the FIX communication protocol.
- The document does not describe the inner workings of the FIX protocol itself. Refer to the subsequent sections for more details.

1.2 REVISION HISTORY

DATE	VERSION	BY	CHANGE
29-11-2013	1.0	PPM	Initial version of the Engagement User Guide.
15-01-2014	1.3	PPM	Reviewed version.
25-03-2014	1.4	PPM	Incremental Refresh
31/03/2014	1.5	PPM	Reviewed Version
03/04/2014	1.6	PPM	Reviewed Version
15/04/2014	1.7	PPM	Reviewed Version
02/05/2014	1.8	PPM	Reviewed Version
29/05/2014	1.9	PPM	Added functionality of several pools per connector
03/06/2014	2.0	PPM	Reviewed Version
16/06/2014	2.1	PPM	Reviewed Version
29/05/2015	2.2	SLM	Add contact details

1.3 ABBREVIATIONS

TERM	DESCRIPTION
FIX	Financial Information Exchange

DMA	Direct Market Access
CET	Central Eastern Time
UTC	Universal Time Coordinates
DST	Daylight Saving Time
SQ	Streaming Quotes
RFQ	Request For Quote
EBS	Electronic Banking System
VPN	Virtual Private Network
SSL	Secure Socket Layer
FX	Foreign Exchange

1.4 REFERENCE LIST

REFERENCE	LINK
Saxo Prime API supports FIX version 4.4. For further information about this version please refer to the specifications published by the FIX Protocol Organization under	http://www.fixprotocol.org/specifications/FIX.4.4

2 CONNECTIVITY

CONNECTIVITY

Connection type

- ✓ Connection to Saxo Prime API FIX engine is available over the Internet, VPN tunnel or cross-connect to our datacenter facilities in UK (London) and US (New York). Please contact us for further details.

Hours of operations

- ✓ Connection to Saxo Prime API FIX engine is available from SUN 17:00 till FRI 17:00 NYK. The locale NYK is either EST or EDT timezone depending on the time of year.
- ✓ Saxo Group is closed December 25 and January 1 (UTC).

Sequence number reset

- ✓ Sequence numbers on all pricing and trading sessions are reset at every successful login.

Security and authentication

- ✓ Saxo uses SSL (Socket Secure Layer) to secure the FIX trading sessions and will provide you with all necessary details, no SSL supported for the pricing connections. Once the connection to the Saxo Prime API FIX server is established the client has to authenticate against the server with a username and password added to the logon (MsgType=A) message.

SESSIONS

- ✓ For better separation of pricing and trading data, clients need to establish two separate FIX connections (with two separate login credentials) to the Saxo Prime API FIX Server, one for pricing and one for trading data.
-

3 MESSAGES

As defined in the FIX protocol, the Saxo Prime API FIX server is using two different data levels: Session and Application. The Session level handles the delivery of data and the Application level defines the business-related data content. The following session and application messages are supported by the Saxo Prime API FIX Engine:

Session messages:

- ✓ Heartbeat (Client ↔ Saxo)
- ✓ Test Request (Client ↔ Saxo)
- ✓ Logon (Client → Saxo)
- ✓ Logout (Client → Saxo)
- ✓ Resend Request (Client ↔ Saxo)
- ✓ Reject (Client ↔ Saxo)
- ✓ Sequence Reset (Client ↔ Saxo)

Application messages:

- ✓ Market Data Request (Client → Saxo)
- ✓ Market Data Request Reject (Client ← Saxo)
- ✓ Mass Quote (Client ← Saxo)
- ✓ MassQuoteAcknowledgement (Client → Saxo)
- ✓ New Order Single (Client → Saxo)
- ✓ Execution Report (Client ← Saxo)

3.1 STANDARD MESSAGES

STANDARD HEADER			
TAG	FIELD NAME	REQ'D	COMMENTS
8	BeginString	Y	Identifies beginning of new message and protocol version (always first field in message)
9	BodyLength	Y	Message length (in bytes) forward to the Check-Sum field (always second field in message)
35	MsgType	Y	Defines message type (always 3rd tag in message)
49	SenderCompID	Y	Assigned value used to identify the client sending messages (will be provided by Saxo)
56	TargetCompID	Y	Assigned value used to identify receiving party (will be provided by Saxo)
34	MsgSeqNum	Y	Integer message sequence number
50	SenderSubID	N	Optional. Assigned value used to identify specific message originator (desk, trader, etc.) (will be provided by Saxo if necessary)

STANDARD TRAILER			
TAG	FIELD NAME	REQ'D	COMMENTS
10	Checksum	Y	Three digit character representing the checksum value of the message

3.2 SESSION MESSAGES

HEARTBEAT (MSGTYPE=0)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=0
112	TestReqID	N	Req'd when the heartbeat is the result of a Test Request message
	Standard Trailer	Y	

TEST REQUEST (MSGTYPE=1)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=1
112	TestReqID	Y	A unique identifier for this test message
	Standard Trailer	Y	

LOGON (MSGTYPE=A)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=A
98	EncryptMethod	Y	Use of Encryption, set to "0".
108	HeartBtInt	Y	Heart beat interval in seconds.
141	ResetSeqNumFlag	N	Indicates both sides of a FIX session should re-set sequence numbers
553	Username	Y	Username (provided by Saxo)
554	Password	Y	Password (provided by Saxo)
	Standard Trailer	Y	

LOGOUT (MSGTYPE=5)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=5
58	Text	N	Reason for logout
	Standard Trailer	Y	

RESEND REQUEST (MSGTYPE=2)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=2
7	BeginSeqNo	Y	
16	EndSeqNo	Y	
	Standard Trailer	Y	

REJECT (MSGTYPE=3)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=3
45	RefSeqNum	Y	MsgSeqNum of rejected message
371	RefTagID	N	The tag number of the FIX field being referenced.
372	RefMsgType	N	The MsgType of the FIX message being referenced.
373	SessionRejectReason	N	Code to identify reason for a session-level
	Standard Trailer	Y	

SEQUENCE RESET (MSGTYPE=4)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=4
123	GapFillFlag	N	
36	NewSeqNo	Y	
	Standard Trailer	Y	

3.3 APPLICATION MESSAGES

MARKET DATA REQUEST (MSGTYPE=V)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=V
262	MDReqID	Y	Unique request id. As this value will be reflected in tag 302 of the MassQuote message the accepted length is limited to a maximum of 3 characters.
263	SubscriptionRequestType	Y	1 = Snapshot plus updates (subscribe) 2 = Disable previous snapshot plus update re-quest (unsubscribe)
264	MarketDepth	Y	Specifies the number of layers streamed. 0=full book >0 = number of layers
146	NoRelatedSym	Y	Always set to 1.
55	Symbol	Y	Symbol to trade on.
7533	StreamId	C	If a connector only utilizes one stream, then this field is not needed. If a connector utilizes more than one stream then this tag will hold the Stream Identifier. The Id's of the streams and their descriptions will be provided by Saxo.
	Standard Trailer	Y	

MARKET DATA REQUEST REJECT (MSGTYPE=Y)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=Y
262	MDReqID	Y	ID of the market data request
58	Text	N	Reason for market data request being rejected
	Standard Trailer	Y	

MASS QUOTE					
TAG		FIELD NAME	REQ'1	COMMENTS	
		Standard Header	Y	MsgType=i	
117		QuoteID	N	If QuoteID is set the client has to respond immediately with a MassQuoteAcknowledgement message reflecting this value in tag 117	
296		NoQuoteSets	Y	No of entries following	
→	302	QuoteSetID	Y	Unique request id. As this tag will be the same value as set in tag 262 of the MassQuoteRequest message. The accepted length is limited to a maximum of 3 characters.	
→	295	NoQuoteEntries	Y	Number of quotes in a quote set	
	→	299	QuoteEntryID	Y	Unique Market Data Identifier (0 <= x < depth). The current QuoteSet data replaces prior QuoteSet data received under the same QuoteEntryID.
	→	134	BidSize	N	Maximum bid size. Not set = no changes. -1 = quote cancel
	→	135	OfferSize	N	Maximum offer size. Not set = no changes. -1 = quote cancel
	→	188	BidSpotRate	N	Spot bid rate. Not set = no changes
	→	190	OfferSpotRate	N	Spot ask rate. Not set = no changes
		Standard Trailer	Y		

MASS QUOTE ACKNOWLEDGEMENT

This message is to be sent, from client side to the Saxo Prime Server, whenever a Mass Quote appears with tag 117 filled. Not responding with an acknowledgment will lead to a halt of the mass quote feed. The acknowledgement response time will adjust the frequency of quote updates.

TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=b
117	QuoteID	Y	QuoteID copy from MassQuote message.
	Standard Trailer	Y	

NEW ORDER - SINGLE (MSGTYPE=D)			
TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=D
11	ClOrdID	Y	Must be unique identifier sent by the client. Used for response
1	Account	C	<p>If the connector is associated to only one stream then this tag is not necessary.</p> <p>If a connector has more than one stream then Tag1 is mandatory. Its value will be provided by Saxo. The value will be a system Id identifying an execution pool associated to a specific stream. Note: This is not the same as the Saxo Account Id (the latter is to be filled in tag 115)</p>
115	OnBehalfOfCompId	Y	Saxo Account ID as provided by Saxo
526	EndClientIdentifier	Y	<p>For partners that have a second level of end user, trading directly on the Saxo Prime connection, this field is to be filled by their userids (this is not a Saxo ID nor a name of the end user, but a partner system id) concatenated with the end users account Id. As a field delimiter please use “-” (hifen).</p> <p>Example: Tag526 = “Trader1 – 1231”, “Trader1-1234”, “Trader2-12355”</p> <p>For Partners that trade (for themselves) directly on the Saxo Prime connection this field is to be filled by the method of trade placement used. For example a partner that operates with 2 different hedging methodologies, plus 2 Algos, and a manual option that could be coded as Tag 526 = ‘HedgeMethod1’ v ‘HedgeMethod2’ or ‘Manual’ or ‘FundAlgo1’ v ‘FundAlgo2’</p>
55	Symbol	Y	Symbol to trade on.
15	Currency	N	The dealt currency. Defaults to the base

			currency of the symbol
54	Side	Y	Side of order in reference to the dealt currency (tag 15) Valid values: 1 = Buy 2 = Sell
38	OrderQty	Y	The amount for the order in the specified Currency (tag 15)
40	OrdType	Y	Type of order. Valid values: 1 = Market 2 = Limit
44	Price	C	Required if OrdType (40) = "Limit". The price where at the client wants to buy or sell.
110	MinQty	N	Minimum accepted fill size. Defaults to 0.0 <ul style="list-style-type: none"> • $0.0 \leq x \leq \text{OrderQty}$ • If $x < \text{OrderQty}$ then request is treated as an IOC • If $x = \text{OrderQty}$ then request is treated as a FOK
10000	TTL	N	Length of time (in milliseconds) that execution should be attempted on the order. If the first attempt is unsuccessful, the order will be re-tried provided it is still within the specified TTL. There is no limit to how many times an order can be re-tried within the TTL. Once the TTL passes if all execution attempts are unsuccessful, the order expires. The TTL on an order will always be the minimum of the default TTL value configured on the connector (350ms unless agreed otherwise) or the value sent in tag 10000.
10001	DEVIATION	N	Double value. Accepted deviation from the price submitted in tag 44. Only applicable if 40=2. Defaults to 0.0. Setting this value to 0.00002 for a sell EURUSD limit order would allow for execution on prices as low as 0.2 pips below the specified price. The preferred mode of operation for limit

			orders is to set tag 44 at current market price and use tag 10001 to define a specific slippage acceptance.
60	TransactTime	Y	Time this order request was initiated/released by the client
	Standard Trailer	Y	

EXECUTION REPORT (MSGTYPE=8)

TAG	FIELD NAME	REQ'D	COMMENTS
	Standard Header	Y	MsgType=8
11	ClOrdID	Y	Must be unique identifier sent by the client. Used for response
17	ExecID	Y	Unique identifier of execution message; will be set to "0" for ExecType(150) not "F"
150	ExecType	Y	The execution report's type, valid values: 0 = New 3 = Done 8 = Rejected C = Expired F=Trade (Partial Fill or Fill)
55	Symbol	Y	Symbol of cross.
54	Side	Y	Side of order Valid values: 1 = Buy 2 = Sell
38	OrderQty	Y	Quantity ordered
110	MinQty	Y	Minimum quantity ordered.
40	OrdType	Y	Type of order. Valid values: 1 = Market 2 = Limit
15	Currency	Y	Dealt Currency
44	Price	C	The price where at the client wants to buy or sell (for OrdType (40) = "Limit"). Used if OrdType (40) = "Limit"

37	OrderID	Y	Unique Saxo order ID
39	OrdStatus	Y	<p>Current order state.</p> <p>0 = New 1 = Partially filled 2 = Filled 4 = Canceled 8 = Rejected</p> <p>“New” will always be followed by another order state. “Partially filled” will be followed by either “Filled” or “Canceled”. “Filled”, “Canceled” and “Rejected” are final order states.</p>
32	LastQty	C	Quantity (e.g. shares) bought/sold on this (last) fill. Only set when ExecType (150) = “F”
31	LastPx	C	Price of this (last) fill. Only set when ExecType (150) = “F”
151	LeavesQty	C	Remaining quantity open for execution
14	CumQty	C	Currently executed quantity for chain of fills for the same order. Only set when ExecType (150) = “F”
6	AvgPx	C	Average price. Only set when ExecType (150) = “F”
64	SettlDate	C	<p>Will be present if “Execution Type” (tag 150) is equal to “F”</p> <p>ValueDate of execution quantity</p>
60	TransactTime	Y	Time the transaction represented by this ExecutionReport occurred
58	Text	C	Free format text string. Will contain the reason if a rejection occurred
	Standard Trailer	Y	

4 CONTACT DETAILS

If you have any questions to this Rule of Engagement, please do not hesitate to send us an email to ETCS@Saxobank.com or call us at +45 3977 6903.