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## FIX Message Reference – Fixed Income

Version 1.7  
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## Attention Point

This document is a preliminary version that may change. The structure of data here is to assist B3 clients in the beginning of the development of market data connectivity for the new fixed income platform.

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## Change Log

Date	Version	Description	Author
October 23rd, 2023	1.0	- Initial version	IMKY
November 07th, 2023	1.1	- Added messages Logon (35=A), Heartbeat (35=0), TestRequest (35=1), ResendRequest (35=2), Reject (35=3), SequenceReset (35=4) and Logout (35=5).	IMKY
January 31st, 2024	1.2	- Added tag SenderSubID (50) in Standard Message Header. - ExecutionReport (35=8): <ul style="list-style-type: none"> <li>added tags that are used for Voice: RegistID (513), Designation (494), CrossId (548), OrigCrossId (551), SettIType (63), SettIDate(64) and SolicitedFlag (377)</li> <li>added tag Execlnst (18)</li> <li>removed tags PositionEffect (77) and CrossedIndicator (2523).</li> </ul>	IMKY
March 21st, 2024	1.3	- Added tags in message ExecutionReport (35=8) that indicate the Legs of an execution: • NoLegs (555), LegSymbol (600), LegSide (624), LegQty (687), LegPrice (566), LegRefID (654).	IMKY
April 25th, 2024	1.4	- Added tags in message ExecutionReport (35=8): <i>No required:</i> MaturityDate (541) NoNestedPartyIDs (539) <i>Required:</i> NestedPartyID (524) NestedPartyIDSource (525) NestedPartyRole (538)	IMKY
May 3rd, 2024	1.5	Correction of the NestedPartyRole (538) tag domain from 7 to 8.	IMKY

Jul 30th, 2024	1.6	<ul style="list-style-type: none"> <li>- Added new valid value in tag OrdType (40) <ul style="list-style-type: none"> <li>• Q – Counter Order Selection</li> </ul> </li> <li>- Changed tag SettlDate (64) to conditional. <ul style="list-style-type: none"> <li>• Conditions: If tag SettlType (63) = B (BrokenDate), it is mandatory, otherwise, it must not be included.</li> </ul> </li> <li>- Changed tag SettlType (63) to mandatory <ul style="list-style-type: none"> <li>• Added comment to B-BrokenDate option: If this value is specified, tag 64 must be sent.</li> </ul> </li> <li>- Changed tag Price (44) to conditional. <ul style="list-style-type: none"> <li>• Added comment: Only pricing in PU is accepted. Tag 236 does not need to be sent.</li> </ul> </li> <li>- Removal of tag SenderSubID (50) from Standard Message Header.</li> <li>- Added new tag 236: Yield in message type ExecutionReport (35=8).</li> </ul>	MBS
August 06th, 2024	1.7	Added optional tag ContraTrader (337) in message ExecutionReport (35=8)	IMKY

## 1. Standard Messages

### Standard Message Header

Tag	Tag name	Req	Data Type	Comment
8	BeginString	Y	String (7)	"FIX.4.4".
9	BodyLength	Y	Length (6)	(Always unencrypted, must be second field in message)
35	MsgType	Y	String (4)	(Always unencrypted, must be third field in message) Valid values: 8 - Execution Report
49	SenderCompID	Y	String (50)	Please contact B3 for appropriate CompID assignment.
56	TargetCompID	Y	String (50)	Please contact B3 for appropriate CompID assignment.
34	MsgSeqNum	Y	Seqnum (9)	Integer message sequence number.
52	SendingTime	Y	UTCTimestamp (21)	Expressed in UTC (Universal Time Coordinated)

### Standard Message Trailer

Tag	Tag name	Req	Data Type	Comment
10	Checksum	Y	String (3)	Always unencrypted, always last field in message

## 2. Session Level Messages

### 2.1. Logon (35=A)

Tag	Tag name	Req	Data Type	Comment
<b>[Standard Message Header]</b>				
98	EncryptMethod	Y	Int (1)	Must be "0"
108	HeartBtInt	Y	Int	Recommended: "30"
141	ResetSeqNumFlag	N	Boolean (1)	Indicates that both sides of the FIX session should reset sequence numbers.
553	Username	N	String	CAU username
554	Password	N	String	CAU Password
35002	CancelOnDisconnectType	N	Int	Indicates whether orders should remain active on disconnection. Values valid: 0 – Doesn't cancel on disconnection 1 – Cancel on disconnection
35003	CancelOnDisconnectTimeoutWindow	N	Int	Timeout in seconds to trigger cancellation after disconnection
<b>[Standard Message Trailer]</b>				

## 2.2. Logout (35=5)

Tag	Tag name	Req	Data Type	Comment
[Standard Message Header]				
58	Text	Y	String (250)	Explanation for Logout reason (if any).
[Standard Message Trailer]				

## 2.3. Heartbeat (35=0)

This message is sent over the instrument definition, snapshot recovery and incremental streams to notify customers that the multicast channel join was successful and that B3 will send the data when available.

There is no body for this message, only the standard header with tag 35=0.

## 2.4. TestRequest (35=1)

Tag	Tag Name	Req'd	Datatype	Comment
[Standard Message Header]				
112	TestReqID	Y	String	Identifier required for testing. Field included in the test request message to be returned without resulting flag
[Standard Message Trailer]				

## 2.5. ResendRequest (35=2)

Tag	Tag Name	Req	Datatype	Comment
[Standard Message Header]				
17	BeginSeqNo	Y	SeqNum (9)	Message sequence number of first message in range to be resent
16	EndSeqNo	Y	SeqNum (9)	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo = EndSeqNo If request is for all messages subsequent to a particular message, EndSeqNo = 0 (representing infinity).
[Standard Message Trailer]				

## 2.6. Reject (35=3)

Tag	Tag Name	Req	Datatype	Comment
[Standard Message Header]				
45	RefSeqNum	Y	SeqNum (9)	Message sequence number of first message in range to be resent
58	Text	N	String (250)	Where possible, message to explain reason for rejection

Tag	Tag Name	Req	Datatype	Comment
371	RefTagID	N	Int	The tag number of the FIX field being referenced.
372	RefMsgType	N	String (2)	The MsgType of the FIX message being referenced.
373	SessionRejectReason	Y	Int (6)	Code to identify reason for a session-level <u>reject</u> message. Valid values: 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = ComplID problem 10 = Sending time accuracy problem 11 = Invalid MsgType 12 = XML Validation error 13 = Tag appears more than once 14 = Tag specified out of required order 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating group 17 = Non "Data" value includes field delimiter (<SOH> character) 99 = Other
<b>[Standard Message Trailer]</b>				

## 2.7. SequenceReset (35=4)

Tag	Tag Name	Req	Datatype	Comment
<b>[Standard Message Header]</b>				
43	PossDupFlag	N	Boolean (1)	Indicates possible retransmission of message with this sequence number Valid values: Y = Possible duplicate N = Original transmission
122	OrigSendingTime	N	UTC Timestamp (21)	Original time of message transmission (always expressed in UTC) when transmitting orders as the result of a resend request.
123	GapFillFlag	N	Boolean (1)	Indicates that the sequence reset message is replacing administrative or application messages which will not be resent. Valid values: Y = Gap fill message, MsgSeqNum field valid N = Sequence ignore MsgSeqNum



Tag	Tag Name	Req	Datatype	Comment
36	NewSeqNo	Y	SeqNum (9)	New sequence number
[Standard Message Trailer]				

### 3. Application Level Message

#### 3.1. ExecutionReport (35=8)

Tag	Tag name	Req	Data Type	Comment
[Standard Message Header]				
37	OrderID	Y	String (26)	Unique identifier for Order as assigned by the exchange. Uniqueness is guaranteed within a single trading day/instrument. Value is "NONE" if order is rejected.
198	SecondaryOrderID	N	String (26)	Exchange-generated order identifier that changes for each order modification event, or quantity replenishment in disclosed orders.
11	ClOrdID	Y	String (38)	Unique identifier of the order as assigned by the mBarket participant.
41	OrigClOrdID	N	String (38)	Contains the ClOrdID of the replacement order. Conditionally required when ExecType = 5 (Replace).
31	LastPx	N	Price (20)	Price of this (last) fill.
32	LastQty	N	Qty (9)	Quantity of shares bought/sold on this (last) fill. Conditionally required when ExecType = F (Trade).
5149	Memo	N	String (50)	Free format text field. This field may be used to convey client's relevant info. It's always echoed in the reports.
111	MaxFloor	N	Qty (9)	Maximum number of shares or contracts within an order to be shown on the match engine at any given time. Echo from original order's MaxFloor.
453	NoPartyIDs	Y	NumInGroup (2)	Repeating group below should contain unique combinations of PartyID, PartyIDSource, and PartyRole.
→	448	PartyID	Y	String (50) Used to identify source of PartyID. Conditionally required if NoPartyID > 0.
→	447	PartyIDSource	Y	Char (1) Identifies class or source of the PartyID (448) value. Conditionally required if NoPartyID > 0. Valid values: D - Proprietary Custom Code

Tag	Tag name	Req	Data Type	Comment	
→	452	PartyRole	Y	Int (5)	Identifies the type or role of the PartyID (448) specified. Conditionally required if NoPartyID > 0. Valid values: 36 - Entering Trader 54 - Sender Location 58 - Entering Desk 59 - Executing Desk 76 - Desk Id 1005 - Strategy ID  Note: 36, 54 and 58 are required for voice. 76 and 1005 are optional and equivalent to desk, book and strategy details (for future use)
17	ExecID	Y	String (32)	Unique identifier of execution message as assigned by the exchange – unique per instrument.	
19	ExecRefID	N	String (32)	Reference identifier used with Cancel and Correct transaction types.	
150	ExecType	Y	Char (1)	Describes the action that triggered this specific Execution Report - see the OrdStatus (39) tag for the current order status (e.g, Partially Filled). Valid values: 0 - New 4 - Canceled 5 - Replace 8 - Rejected A - Pending New D - Restated F - Trade G - Trade Correct H - Trade Cancel	
18	ExecInst	N	String (5)	Execution Instruction used to report voice intermediate state during cancel workflow: Valid values: PCC – Pending Cancel Counterparty PCM – Pending Cancel Market Surveillance CRM – Cancel Reject Counterparty CRC – Cancel Reject Market Surveillance	
39	OrdStatus	Y	Char (1)	Order status. Valid values: 0 - New 1 - Partially Filled 2 - Filled 4 - Canceled 5 - Replaced 8 - Rejected	

Tag	Tag name	Req	Data Type	Comment
55	Symbol	Y	String (20)	B3 requires that this field is properly set. It contains the human readable form of the SecurityID tag, available in the Security List message in Market Data feed.
48	SecurityID	N	String (12)	Security ID as defined by B3. For the SecurityID list, see the Security List message in Market Data feed.
54	Side	Y	Char (1)	Side of order. Valid values: 1 - Buy 2 - Sell
38	OrderQty	Y	Qty (15)	Quantity ordered.
40	OrdType	Y	Char (1)	Conditionally required when ExecType != 8 (Reject) or ExecType != H (Trade bust). Valid values: 2 - Limit Q - Counter Order Selection
423	PriceType	N	Int (2)	Code to represent the price type. Valid values: 2 - Per Unit 9 - Yield
44	Price	C	Price (20)	Price per share or contract. Conditionally required if the order type requires a price (not market orders and RLP). Only pricing in PU is accepted and only in Voice Type Messages. Tag 236 does not need to be sent.
59	TimeInForce	N	Char (1)	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. Valid values: 0 - Day L - Liquidity Seeking
151	LeavesQty	Y	Qty (9)	Amount of shares open for further execution, or unexecuted. LeavesQty = OrderQty - CumQty.
14	CumQty	Y	Qty (9)	Total number of shares or contracts filled.
6	AvgPx	Y	Price (1)	Always 0 (zero).
75	TradeDate	N	LocalMktDate (8)	Indicates date of trade referenced in this message in YYYYMMDD format (expressed in local time at place of trade). Absence of this field indicates current day (expressed in local time at place of trade).
60	TransactTime	N	UTCTimestamp (21)	Time of execution/order creation; expressed in UTC.

Tag	Tag name	Req	Data Type	Comment	
6032	UniqueTradeID	N	String (10)	Contains the unique identifier for this trade, per instrument + trading date, as assigned by the exchange. Conditionally required if ExecType = F (Trade).	
1180	ApplID	N	String (50)	Identifies the application with which a message is associated. Used only if application sequencing is in effect.	
58	Text	N	String (250)	Free format text string	
494	Designation	N	String (38)	Supplementary registration information for this Order (used for Voice)	
513	RegistID	N	String (38)	Reference to Registration Instructions message for this Order (Blotter Trade ID)	
548	CrossID	N	String (38)	CrossID for the replacement order (used for Voice)	
551	OrigCrossID	N	String (38)	Must match original cross order. Same order chaining mechanism as ClOrdID/OrigClOrdID with single order Cancel/Replace (used for Voice)	
382	NoContraBrokers	N	NumInGroup (2)	Number of ContraBrokers repeating group instances. Filled up when Voice order (used for Voice)	
→	375	ContraBroker	N	String (38)	Used in voice to inform the counterparty (used for Voice)
→	337	ContraTrader	N	String (38)	Used to identifies the trader of the ContraBroker (375)
236	Yield	C	Percentage	InterestRate in percentage. Only pricing in Yield is accepted. Tag 44 does not need to be sent.	
63	SettlType	Y	Char (1)	Indicates order settlement period (used for Voice). Valid values: 0 - Regular 1 - T + 1 2 - T + 2 3 - T + 3 B - BrokenDate (If this value is specified, tag 64 must be sent)	
64	SettlDate	C	LocalMktDate	Specific date of trade settlement (SettlementDate) in YYYYMMDD format (used for Voice). Conditional tag. If tag 63 = B (BrokenDate), it is mandatory, otherwise, it must not be included.	
377	SolicitedFlag	N	Boolean	Indicates whether or not the order was solicited (It is used on Voice to indicates if an action is required by Participant)	
541	MaturityDate	N	LocalMktDate	Security maturity date.	

Tag	Tag name	Req	Data Type	Comment		
555	NoLegs	N	NumInGroup (2)	For structure products, the corresponding legs will be return at this repeating group. Required only for strucuted products and ExecType = G (Trade Correct)		
→	600	LegSymbol	N	String (20)	Leg concerned Symbol	
→	624	LegSide	N	Char (1)	Side of order. Valid values: 1 - Buy 2 – Sell	
→	687	LegQty	N	Qty (9)	Leg concerned executed Quantity.	
→	566	LegPrice	N	Price (20)	Leg concerned executed Price.	
→	654	LegRefID	N	String (20)	Leg concerned TradeID.	
→	539	NoNestedPartyIDs	N	NumInGroup (1)	Repeating group below should contain the broker code where the structure product has been traded in Future platform (PUMA).	
→	→	524	NestedPartyID	Y	String (20)	Broker code where the structure product has been traded in Future platform (PUMA).
→	→	525	NestedPartyIDSource	Y	Char (1)	Identifies class or source of the PartyID (448) value. Conditionally required if NoPartyID > 0. Valid values: D - Proprietary Custom Code
→	→	538	NestedPartyRole	Y	Int (5)	Identifies the type or role of the PartyID (448) specified. Conditionally required if NoPartyID > 0. Valid values: 7 - Entering Firm
<b>[Standard Message Trailer]</b>						