



Market HUB FIX Message Specifications





Document Control

Change I	Change History					
Version	Date	Author/Editor	Details of Change			
1	10 Mar 2008	List				
2	03 Mar 2009	List	Modifications regarding Best Execution			
2.7	23 feb 2012	List	Introducted SettlementLocation in Execution Report Customization			
2.8	01 mar 2012	List	Modified Market Hub Logo			
2.9	20 mar 2012	Banca IMI	Modified Customization for BE			
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2.13	4 June 2013	List	Added new tag 211 Added new values to tags 18 and 40 Added fields to chapter 3.1.1.3 Modified table in chapter 3.1.2.7 Modified table in chapter 7.4			
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3.1	13 June 2016	AM Mhub	Modified Tag 40. Added section 3.1.2.8			
3.2	18 September 2017	AM Mhub	Added tags 1057 and 851 on ExecutionReport, increased domain values on side and new repeating group 2668			
3.3	21 Sept 2017	AM Mhub	Inserted note on tag 1057 and 851			
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3.6	06 June 2018	AM Mhub	Inserted note on Repeating Group 2593 – 2594 - 2595			
3.7	27 June 2018	AM Mhub	Inserted note on FIX ATDL			
3.8	11 September 2020	AM Mhub	Inserted note on OTO/OCO/OTOCO Orders and MutiMarket Best Execution			





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1 Introduction

This document is specific for Banca IMI customers (from hereafter 'Buy side') and describes the specifications for communicating with Market HUB via FIX protocol.

The following security types are tradable on Market HUB:

- Certificates
- Equities
- Government and Corporate Bonds
- Warrants/Covered Warrants

The FIX versions supported are: 4.0, 4.1, 4.2, 4.3 and 4.4.

Where necessary, some comments may specify whether a tag is not defined or not used in a particular version of FIX protocol (or other peculiarities).

In the absence of specifications, such as for administrative messages, Buy side users should refer to the standard FIX protocol.

Market HUB ignores any tags not specified in this document (the tags are not managed) whether they are in the header of the message or in the message body.





2 FIX MESSAGE HEADER

A standard FIX message header precedes each FIX message.

The table below details the fields handled in the message header.

Tag	Field Name	Content	Req
8	BeginString	FIX.4.x (must be first field in message)	Υ
9	BodyLength	Message length in bytes (must be second field in message)	Y
35	MsgType	FIX message type (i.e. "D" for new orders) (must be third field in message)	Y
49	SenderCompID	Assigned value used to identify firm sending message	Υ
50	SenderSubId	Assigned value used to identify specific message originator (desk, trader, etc.)	N
115	OnBehalfOfCompID	For more details see <u>Section 6</u> .	N
116	OnBehalfOfSubId	For more details see <u>Section 6</u> .	N
56	TargetCompID	Assigned value used to identify receiving firm	Υ
34	MsgSeqNum	Integer message sequence number	Υ
52	SendingTime	Time of message transmission (always expressed in UTC, also known as GMT) UTC TimeStamp: 20030620-10:06:51	Υ
43	PossDupFlag	Indicates possible retransmission of message with this sequence number. Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request.	N
97	PossResend	Indicates that message may contain information that has been sent under another sequence number. Required when message may be a duplicate version of another message sent under a different sequence number.	N
122	OrigSendingTime	Original time of message transmission (always expressed in GMT) when transmitting orders as the result of a resend request. If data is not available set to same value as SendingTime.	N





3 Application Level Messages - Trading

The messages managed by Market HUB are listed in the table below. The table also details the values used in tag 35 and tag 150 in the Execution Report message.

Name	Msg	Exec	Direction	Note
Name	Type (Tag 35)	Type (Tag 150)	Market HUB	
New Order Single	D	-	Input	Used by institutions wishing to electronically submit orders to a broker for execution
New Order List	Е	-	Input	Used to electronically submit more than one order to a broker for execution. Used for complex orders (OCO/OTO/OTOCO).
Order Cancel Request	F	-	Input	Requests the cancellation of all of the remaining quantity of an existing order
Order Cancel/Replace	G	-	Input	Used to change the parameters of an existing order
Order List Cancel/Replace	t	-	Input	Used to change the parameters of an existing list order
Order Cancel Reject	9	-	Output	Issued by Market HUB upon receipt of a cancel request or cancel/replace request message which cannot be honored
Execution Report: Pending New	8	А	Output	Confirms the receipt of a new order single, order not sent to market yet
Execution Report: New	8	0	Output	Confirms the new order single is on the market
Execution Report: Partial Fill	8	1	Output	Relays partial fill
Execution Report: Fill	8	2	Output	Relays complete fill
Execution Report: Pending Replace	8	Е	Output	Confirms the receipt of an edit request of an existing order (Defined in FIX 4.2 and higher versions)
Execution Report: Replace	8	5	Output	Confirms changes to an existing order





Name	Msg Type (Tag 35)	Exec Type (Tag 150)	Direction Market HUB	Note
Execution Report: Pending Cancel	8	6	Output	Confirms the receipt of a cancelation request of an existing order
Execution Report: Canceled	8	4	Output	Confirms the cancellation of an order (by the market/by the Buy side/as an answer to the Cancel request)
				For more details, see Expiration of orders
Execution Report: Rejected	8	8	Output	Order rejected
Execution Report: Expired/Done for	8	C/3	Output	Order expired (this message is sent at the end of the trading session)
Day				For more details, see Expiration of orders
Execution	8	L	Output	Triggered or Activated by System.
Report: Triggered				For more details see <u>Section</u> 3.2.1.3.
Execution Report: Triggered seconday Leg	8	М	Output	Triggered or Activated by System. Refered only for OTO and OTOCO order.

3.1 Order Entry

3.1.1 Incoming Messages

3.1.1.1 New Order Single (MsgType=D)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Υ
55	Symbol	Ticker symbol Required if tags 22 and 48 are not specified	String	N
48	SecurityID	Security identifier, valued according to the IDSource (22). Currently valued with ISIN.	String	Y





Tag	Field Name	Content	Data Type	Req
22	IDSource	Identifies class of tag 48	String	Υ
		Valid values:		
		2 = SEDOL		
		4 = ISIN number		
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
100	ExDestinatio n	The Exchange where the order has to be executed	String	N
		Must be valued X00 for Best Execution.		
40	OrdType	Order type	Char	Υ
		Valid values:		
		1 = Market (Any Price)		
		2 = Limit		
		3 = Stop		
		4 = Stop limit		
		5 = Market on close		
		6 = With or without (odd-lot)		
		7 = Limit or better (Market To Limit)		
		B = Limit on close		
		P = Pegged (Traling Stop Order)		
		X = Unpriced Limit		
		For more details on Odd-lots see <u>Section</u> 3.1.2.2.		
		For more details on Market to Limit and Any Price Orders see <u>Section 3.1.2.1</u> .		
		For moredetails on Unpriced Limit see Section 3.1.2.8.		





Tag	Field Name	Content	Data Type	Req
59	TimeInForce	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY.	Char	N
		Valid values:		
		0 = Day		
		1 = Good Till Cancel (GTC)		
		2 = At the Opening (OPG)		
		3 = Immediate or Cancel (IOC)		
		4 = Fill or Kill (FOK)		
		5 = Trading At Last Only		
		6 = Good Till Date		
		A = Auction Only		
		N = NTD		
		For more details about NTD Orders see Section 3.1.2.3		
		For more details about Auction Only Orders see Section 3.1.2.6		
44	Price	Price per share. Required for limit order types.	Float	Y
15	Currency	Currency used for price	String	N
		Required if tag 100=X00 (for more details see <u>Section 4</u>).	(3)	
38	OrderQty	Number of shares ordered	Integer	Υ
110	MinQty	Minimum quantity of an order to be executed.	Integer	N
111	MaxFloor	Maximum quantity (e.g. number of shares) within an order to be shown on the exchange floor at any given time.	Integer	N
1	Account	Account as agreed between broker and institution	String (32)	N
432	ExpireDate	Date of order expiration (AAAAMMDD).	String	N
		Conditionally required if tag 59=6 and ExpireTime (tag 126) is not specified.		
		Defined in FIX 4.2 and higher versions		
126	ExpireTime	Time/Date of order expiration.	String	N
		Conditionally required if tag 59=6 and ExpireDate (tag 432) is not specified.		





Tag	Field Name	Content	Data Type	Req
528	OrderCapacit y	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	N
		Default=Third Party order.		
		Valid values:		
		G = Proprietary		
		Defined in FIX 4.3 and higher versions		
47	Rule80A	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	N
		Default=Third Party order.		
		Valid values:		
		P = Proprietary		
		Defined in FIX 4.2 and lower versions		
453	NoPartyIDs	Number of PartyID (448), PartyIDSource (447), and PartyRole (452) entries	Integer	N
		Defined in FIX 4.3 and higher versions		
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	N
		Defined in FIX 4.3 and higher versions		
447	PartyIDSour ce	Identifies class of the PartyID (448) value	Char	N
		D = Proprietary/Custom code		
		Defined in FIX 4.3 and 4.4		
452	PartyRole	Identifies the type or role of the PartyID	Integer	N
		Valid Value		
		3 = ClientID		
		10 = Settlement Location (formerly FIX4.2 SettlLocation)		
		Defined in FIX 4.3 and higher version		
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
109	ClientID	Firm identifier used in third party- transactions	String	N
		Defined in FIX 4.2 and lower versions		
60	TransactTim e	Time of execution/order creation (expressed in UTC, also known as GMT) in microsecond	String	Y
		UTC TimeStamp:		
		20030620-10:06:51.000000		
		Defined in FIX 4.2 and higher versions		





Tag	Field Name	Content	Data Type	Req
21	HandlInst	Instructions for order handling on Broker trading floor	Char	Y
		Valid values:		
		1 = Not care order		
		2 = Not care order		
		3 = Care order		
18	ExecInst	MiFID - Best Execution Indicator	String	N
		Valid values:		
		A = Internalization forbidden		
		B = Internalization allowed		
		Not set or other values = as set in the Execution Policy.		
		Required for pegged orders on Chi-X (tag 40 = P).		
		Valid values (mutually exclusive):		
		P = Market Peg		
		R = Primary Peg		
		M = Mid-price Peg		
836	Peg Offset	Type of Peg Offset value	Integer	N
	Type	Valid values:		
		0 = Price (default)		
		1 = Basis Points		
		2 = Ticks		
		3 = Price Tier / Level		
		4 = Percentage		
211	Peg Offset Value	Amount added to the price of the peg in the contest of the PegOffsetType (836)	Float	N
5026	NFW Best	MiFID – Best Execution Indicator	Char	N
	Execution Indicator	Valid values:		
		0 = Default (The hierarchy provided by the Execution Policy is applied; with respect to the Buy side's classification and to the asset class)		
		1 = Highest priority to Total Consideration		
		2 = Highest priority to Speed of Execution.		
		3 = Highest priority to Probability of Execution.		
		Absence of the field indicates 0 – Default		





Tag	Field Name	Content	Data Type	Req
1104	Trigger Security ID	Defines the identity of the security whose prices will be tracked by trigger logic	String	N
1105	Trigger Security ID Source	Defines the identity of the security whose prices will be tracked by trigger logic. Same values as SecurityIDSource (22)	String	N
50111	Percentage Step	Used with Peg Offset Type (836) = 4	Float	N





Tag	Field Name	Content	Data Type	Req
7001	SettlLocation	Country referring to the central depository where the security will be settled. Valid values include all the ISO 3166 Codes, the value "LU" indicates Euroclear/Clearstream.	String	N
5255	Stop Mechanism	Stop condition requested:	Int	N
		0 = Last Price >= (<=) Stop Price for Buy (Sell) Order		
		1 = Bid Price >= Stop Price		
		2 = Bid Price <= Stop Price		
		3 = Ask Price >= Stop Price		
		4 = Ask Price <= Stop Price		
		5 = Last Price >= Stop Price		
		6 = Last Price <= Stop Price		
		When not specified, the default=0.		
		For more details see Section 3.1.2.7		
58	Text	Free format text string	String	N
		For more details see Section 3.1.2.4		
30004	OrderSource	Defines the source of the incoming order	String	N
		Valid values:	(32)	
		1 = Authorized Direct Member		
		3 = Institutional Client Interconnected		
		7 = Private Client Interconnected		
		8 = Branch of Bank		
		9 = Online Retail Trading		
168	Effective Time	Time the details within the message should take effect (always expressed in UTC, also known as GMT) in managing the NTD orders.	String	N
Rpt group 2593	No Order Attributes	The OrderAttributeGrp component provides additional attributes about the order.	Int	N
2594	Order Attribute Type	3 -> Risk Reduction Order 2 -> Liquidity Provision Order	Int	N
2595	Order Attribute Value	Y / N	Char	N
30000	StrategyIdentifier Tag (ATDL)	Identifier for FIXATDL Strategies. Values: VWAP_ATDL TimeSpread_ATDL VolumeSimple_ATDL Best_ATDL	String	*





Tag	Field Name	Content	Data Type	Req
30100	EndTime (ATDL)	Strategy end time (market time) – UTCTIMESTAMP	String	*
30101	VolumeLimitPrice (ATDL)	Volume Limit price	Float	*
30102	QuoteRequested (ATDL)	Quote enabled: Values: 1 -> YES 2 -> NO	Int	*
30103	LimitPercExec (ATDL)	Percentage execution limit compared to the theoretical curve	Float	*
30104	MinimumQuantity (ATDL)	Release quantity	Float	*
30105	VolumePercent (ATDL)	Participation percentage	Float	*
30106	LimitPercExec (ATDL)	Percentage execution limit compared to the participation percentage	Float	*
30107	NQuoteLevel (ATDL)	Num Quotes	Int	*
30108	HitQtyType (ATDL)	HitType. Values: 0 -> Release (Default) 1 -> Book 2 -> NoHit	Int	*

^{*} See Section 9. APPENDIX FIX ATDL





3.1.1.2 New List Order (MsgType=E)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side. Have to be the first Tag for each order	String (32)	Y
55	Symbol	Ticker symbol	String	N
		Required if tags 22 and 48 are not specified		
48	SecurityID	Security identifier, valued according to the IDSource (22).	String	Y
		Currently valued with ISIN.		
22	IDSource	Identifies class of tag 48	String	Y
		Valid values:		
		2 = SEDOL		
		4 = ISIN number		
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
100	ExDestinatio n	The Exchange where the order has to be executed	String	N
		Must be valued X00 for Best Execution.		
40	OrdType	Order type	Char	Υ
		Valid values:		
		1 = Market (Any Price)		
		2 = Limit		
		3 = Stop		
		4 = Stop limit		
		5 = Market on close		
		6 = With or without (odd-lot)		
		7 = Limit or better (Market To Limit)		
		B = Limit on close		
		P = Pegged (Traling Stop Order)		
		X = Unpriced Limit		





Tag	Field Name	Content	Data Type	Req
59	TimeInForce	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY.	Char	N
		Valid values:		
		0 = Day		
		1 = Good Till Cancel (GTC)		
		2 = At the Opening (OPG)		
		3 = Immediate or Cancel (IOC)		
		4 = Fill or Kill (FOK)		
		5 = Trading At Last Only		
		6 = Good Till Date		
		A = Auction Only		
		N = NTD		
		For more details about NTD Orders see Section 3.1.2.3		
		For more details about Auction Only Orders see Section 3.1.2.6		
44	Price	Price per share. Required for limit order types.	Float	Y
15	Currency	Currency used for price	String	N
		Required if tag 100=X00 (for more details see <u>Section 4</u>).	(3)	
38	OrderQty	Number of shares ordered	Integer	Υ
110	MinQty	Minimum quantity of an order to be executed.	Integer	N
111	MaxFloor	Maximum quantity (e.g. number of shares) within an order to be shown on the exchange floor at any given time.	Integer	N
1	Account	Account as agreed between broker and institution	String (32)	N
432	ExpireDate	Date of order expiration (AAAAMMDD).	String	N
		Conditionally required if tag 59=6 and ExpireTime (tag 126) is not specified.		
		Defined in FIX 4.2 and higher versions		
126	ExpireTime	Time/Date of order expiration.	String	N
		Conditionally required if tag 59=6 and ExpireDate (tag 432) is not specified.		





Tag	Field Name	Content	Data Type	Req
528	OrderCapacit y	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	N
		Default=Third Party order.		
		Valid values:		
		G = Proprietary		
		Defined in FIX 4.3 and higher versions		
47	Rule80A	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	N
		Default=Third Party order.		
		Valid values:		
		P = Proprietary		
		Defined in FIX 4.2 and lower versions		
453	NoPartyIDs	Number of PartyID (448), PartyIDSource (447), and PartyRole (452) entries	Integer	N
		Defined in FIX 4.3 and higher versions		
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	N
		Defined in FIX 4.3 and higher versions		
447	PartyIDSour ce	Identifies class of the PartyID (448) value	Char	N
		D = Proprietary/Custom code		
		Defined in FIX 4.3 and 4.4		
452	PartyRole	Identifies the type or role of the PartyID	Integer	N
		Valid Value		
		3 = ClientID		
		10 = Settlement Location (formerly FIX 4.2 SettlLocation)		
		Defined in FIX 4.3 and higher version		
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
109	ClientID	Firm identifier used in third party- transactions	String	N
		Defined in FIX 4.2 and lower versions		
60	Transact Time	Time of execution/order creation (expressed in UTC, also known as GMT) in microsecond	String	Y
		UTC TimeStamp:		
		20030620-10:06:51.000000		
21	HandlInst	Instructions for order handling on Broker trading floor	Char	Y





Tag	Field Name	Content	Data Type	Req
		Valid values:	7.	
		1 = Not care order		
		2 = Not care order		
		3 = Care order		
18	ExecInst	MiFID - Best Execution Indicator	String	N
		Valid values:		
		A = Internalization forbidden		
		B = Internalization allowed		
		Not set or other values = as set in the Execution Policy.		
		Required for pegged orders on Chi-X (tag 40 = P).		
		Valid values (mutually exclusive):		
		P = Market Peg		
		R = Primary Peg		
		M = Mid-price Peg		
836	Peg Offset	Type of Peg Offset value	Integer	N
	Type	Valid values:		
		0 = Price (default)		
		1 = Basis Points		
		2 = Ticks		
		3 = Price Tier / Level		
		4 = Percentage		
211	Peg Offset Value	Amount added to the price of the peg in the contest of the PegOffsetType (836)	Float	N
5026	NFW Best	MiFID - Best Execution Indicator	Char	N
	Execution Indicator	Valid values:		
		0 = Default (The hierarchy provided by the Execution Policy is applied; with respect to the Buy side's classification and to the asset class)		
		1 = Highest priority to Total Consideration		
		2 = Highest priority to Speed of Execution.		
		3 = Highest priority to Probability of Execution.		
		Absence of the field indicates 0 – Default		
1104	Trigger Security ID	Defines the identity of the security whose prices will be tracked by trigger logic	String	N





Tag	Field Name	Content	Data Type	Req
1105	Trigger Security ID Source	Defines the identity of the security whose prices will be tracked by trigger logic. Same values as SecurityIDSource (22)	String	N
50111	Percentage Step	Used with Peg Offset Type (836) = 4	Float	N
1385	Contingency	Defines the type of contingency	Int	Y
	Туре	Valid Values:		
		1 = One Cancel the Other (OCO)		
		2 = One Triggers the Other (OTO)		
66	ListID	Unique identifier for list as assigned by institution, used to associate multiple individual orders. Uniqueness must be guaranteed within a single trading day. Firms which generate multi-day orders should consider embedding a date within the ListID field to assure uniqueness across days	String	Y
67	List Seq No	Sequence of individual order within list (i. e. ListSeqNo of TotNoOrders (68), 2 of 25, 3 of 25,) Valid Values (OCO): 1 = Take Profit 2 = Stop Loss Valid Values (OTO): 1 = Primary Leg 2 = Secondary Leg Valid Values (OTOCO): 1 = Primary Leg	Int	Y
		2 = Take Profit 3 = Stop Loss		
73	No Orders	Indicates number of orders to be combinated for average pricing and allocation	Int	Y





Tag	Field Name	Content	Data Type	Req
7001	SettlLocation	Country referring to the central depository where the security will be settled. Valid values include all the ISO 3166 Codes, the value "LU" indicates Euroclear/Clearstream.	String	N
5255	Stop Mechanism	Stop condition requested:	Int	N
		0 = Last Price >= (<=) Stop Price for Buy (Sell) Order		
		1 = Bid Price >= Stop Price		
		2 = Bid Price <= Stop Price		
		3 = Ask Price >= Stop Price		
		4 = Ask Price <= Stop Price		
		5 = Last Price >= Stop Price		
		6 = Last Price <= Stop Price		
		When not specified, the default=0.		
		For more details see Section 3.1.2.7		
58	Text	Free format text string	String	N
		For more details see Section 3.1.2.4		
30004	OrderSource	Defines the source of the incoming order	String	N
		Valid values:	(32)	
		1 = Authorized Direct Member		
		3 = Institutional Client Interconnected		
		7 = Private Client Interconnected		
		8 = Branch of Bank		
		9 = Online Retail Trading		
168	Effective Time	Time the details within the message should take effect (always expressed in UTC, also known as GMT) in managing the NTD orders.	String	N
Rpt group 2593	No Order Attributes	The OrderAttributeGrp component provides additional attributes about the order.	Int	N
2594	Order Attribute	3 -> Risk Reduction Order	Int	N
2595	Type Order Attribute Value	2 -> Liquidity Provision Order Y / N	Char	N





3.1.1.3 Order Cancel (MsgType=F)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Y
48	SecurityID	Security identifier, valued according to the IDSource (22).	String	Y
		Currently valued with ISIN.		
22	SecurityIDSource	Identifies class of tag 48	Char	Y
		Valid values:		
		2 = SEDOL		
		4 = ISIN number		
55	Symbol	Ticker symbol	String	N
		Required if tags 22 and 48 are not specified		
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
37	OrderID	Unique identifier for order (Market HUB orderid)	String	N
41	OrigClOrdID	ClOrdID of the previous order, used to identify the previous order in cancel and cancel/replace requests.	String (32)	Y
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
836	Peg Offset Type	Type of Peg Offset value	Integer	N
		Valid values:		
		0 = Price (default)		
		1 = Basis Points		
		2 = Ticks		
		3 = Price Tier / Level		
		4 = Percentage		
38	OrderQty	Number of shares ordered	Qty	N
60	TransactTime	Time of execution/order creation (expressed in UTC, also known as GMT) in microsecond	String	Y
		UTC TimeStamp:		
		20030620-10:06:51.000000		





3.1.1.4 Order Cancel/Replace (MsgType=G)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Y
100	ExDestination	The Exchange where the order has to be executed	String	N
		Must be valued X00 for Best Execution.		
40	OrdType	Order type	Char	Υ
		Valid values:		
		1 = Market (Any Price)		
		2 = Limit		
		3 = Stop		
		4 = Stop limit		
		5 = Market on close		
		6 = With or without (odd-lot)		
		7 = Limit or better (Market To Limit)		
		B = Limit on close		
		P = Pegged		
		X = Unpriced Limit		
		For more details on Odd-lots see Section 3.1.2.2.		
		For more details on Market to Limit and Any Price Orders see Section 3.1.2.1.		
		For more details on Unpriced Limit see Section 3.1.2.8.		
18	ExecInst	MiFID – Best Execution Indicator	String	N
		Valid values:		
		A = Internalization forbidden		
		B = Internalization allowed		
		Not set or other values = as set in the Execution Policy.		
		Required for pegged orders on Chi-X (tag 40 = P).		
		Valid values (mutually exclusive):		
		P = Market Peg		
		R = Primary Peg		
		M = Mid-price Peg		
211	Peg Offset Value	Amount added to the price of the peg in the contest of the PegOffsetType (836)	Float	N





Tag	Field Name	Content	Data Type	Req
48	SecurityID	Security identifier, valued according to the IDSource (22).	String	Υ
		Currently valued with ISIN.		
22	SecurityIDSource	Identifies class of tag 48	Char	Υ
		Valid values:		
		2 = SEDOL		
		4 = ISIN number		
55	Symbol	Ticker symbol	String	N
		Required if tags 22 and 48 are not specified		
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
37	OrderID	Unique identifier for order (Market HUB orderid)	String	N
41	OrigClOrdID	ClOrdID of the previous order, used to identify the previous order in cancel and cancel/replace requests.	String (32)	Y
44	Price	Price per share. Required for limit order types.	Float	N
15	Currency	Currency used for price	String	N
		Required if tag 100=X00 (for more details see <u>Section 4</u>).	(3)	
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
836	Peg Offset Type	Type of Peg Offset value	Integer	N
		Valid values:		
		0 = Price (default)		
		1 = Basis Points		
		2 = Ticks		
		3 = Price Tier / Level		
		4 = Percentage		
38	OrderQty	Number of shares ordered	Qty	N
110	MinQty	Minimum quantity of an order to be executed.	Integer	N





Tag	Field Name	Content	Data Type	Req
111	MaxFloor	Maximum number of shares within an order to be shown on the exchange floor at any given time. If greater than zero then the value must be equal to or multiple of Round Lot Size.	Integer	N

3.1.1.5 Order List Cancel/Replace (MsgType=t)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Y
100	ExDestination	The Exchange where the order has to be executed	String	N
		Must be valued X00 for Best Execution.		
40	OrdType	Order type	Char	Υ
		Valid values:		
		1 = Market (Any Price)		
		2 = Limit		
		3 = Stop		
		4 = Stop limit		
		5 = Market on close		
		6 = With or without (odd-lot)		
		7 = Limit or better (Market To Limit)		
		B = Limit on close		
		P = Pegged		
		X = Unpriced Limit		
18	ExecInst	MiFID - Best Execution Indicator	String	N
		Valid values:		
		A = Internalization forbidden		
		B = Internalization allowed		
		Not set or other values = as set in the Execution Policy.		
		Required for pegged orders on Chi-X (tag 40 = P).		
		Valid values (mutually exclusive):		
		P = Market Peg		
		R = Primary Peg		
		M = Mid-price Peg		





Tag	Field Name	Content	Data Type	Req
211	Peg Offset Value	Amount added to the price of the peg in the contest of the PegOffsetType (836)	Float	N
48	SecurityID	Security identifier, valued according to the IDSource (22).	String	Y
		Currently valued with ISIN.		
22	SecurityIDSource	Identifies class of tag 48	Char	Υ
		Valid values:		
		2 = SEDOL		
		4 = ISIN number		
55	Symbol	Ticker symbol	String	N
		Required if tags 22 and 48 are not specified		
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
37	OrderID	Unique identifier for order (Market HUB orderid)	String	N
41	OrigClOrdID	ClOrdID of the previous order, used to identify the previous order in cancel and cancel/replace requests.	String (32)	Y
44	Price	Price per share. Required for limit order types.	Float	N
15	Currency	Currency used for price	String	N
		Required if tag 100=X00	(3)	
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
836	Peg Offset Type	Type of Peg Offset value	Integer	N
		Valid values:		
		0 = Price (default)		
		1 = Basis Points		
		2 = Ticks		
		3 = Price Tier / Level		
		4 = Percentage		
38	OrderQty	Number of shares ordered	Qty	N
110	MinQty	Minimum quantity of an order to be executed.	Integer	N





Tag	Field Name	Content	Data Type	Req
111	MaxFloor	Maximum number of shares within an order to be shown on the exchange floor at any given time. If greater than zero then the value must be equal to or multiple of Round Lot Size.	Integer	N
66	ListID	Unique identifier for list as assigned by institution, used to associate multiple individual orders. Uniqueness must be guaranteed within a single trading day. Firms which generate multi-day orders should consider embedding a date within the ListID field to assure uniqueness across days	String	Y
67	List Seq No	Sequence of individual order within list (i. e. ListSeqNo of TotNoOrders (68), 2 of 25, 3 of 25,) Valid Values (OCO): 1 = Take Profit 2 = Stop Loss Valid Values (OTO): 1 = Primary Leg 2 = Secondary Leg Valid Values (OTOCO): 1 = Primary Leg 2 = Take Profit	Int	Y
73	No Orders	3 = Stop Loss Indicates number of orders to be	Int	Y
, ,	No Orders	combinated for average pricing and allocation	1110	1
1385	Contingency Type	Defines the type of contingency Valid Values: 1 = One Cancel the Other (OCO) 2 = One Triggers the Other (OTO)	Int	Y





3.1.2 Customizations on Incoming Messages

3.1.2.1 "Market to Limit" and "Any Price" Orders (tag 40)

As specified in the table below, Market HUB allows the Buy Side to enter an order with the following values in tag 40:

- 1 = Any Price order
- 7 = Market to Limit order

However, if requested by the Buy Side, this configuration can be reverted. Consequently the values in tag 40 would mean:

- 1 = Market to Limit order
- 7 = Any Price order

This configuration may be obtained by configuring the Client Type as IOM in the Access Protocol Rules.

3.1.2.2 Odd-lot orders

Odd-lot orders have a quantity that is lower than the minimum lot specified. Tag 40=6 can be used for entering Odd-lot orders to RetlotsPit market.

When the tag 40 is used to indicate the Odd-lot, the information on the price type (Limit/Market) is based on tag 44 (Price) as follows:

- Price set to 0 or not defined = Market
- Limit price indicated = Limit

3.1.2.3 NTD (Next Trading Day) Orders

The indication "NTD" (tag 59=N) allows the Buy side to send orders when the market is closed. These orders will be tradable the next trading day and valid only for a day.

3.1.2.4 Care Orders

The instructions for the execution of Care Orders can be sent in tag 58.

3.1.2.5 Incremental Fees

Some trading systems (such as Bloomberg) only return the latest amount of fees in the Execution Report. Thus, there is a new feature for showing incremental fees. If desired by the Buy side, this feature can be enabled during the configuration.

3.1.2.6 Auction Only Orders

The new TimeInForce (tag 59=A) was implemented during the migration of the Italian MTA market to the TradElect platform. The Auction Only Orders are valid only during the auction phase.

3.1.2.7 Stop Condition

Tag 99 (Stop Price), tag 40 (OrdType=Stop/Stop Limit) and the custom tag 5255 (Stop Mechanism) are used by Market HUB in handling stop orders. The activation of a stop order is notified with an execution report with tag 150=L (see Section 3.2.1.3).

The valid values for tag 5255 are detailed in the table below. If the tag is not specified, the default stop condition is Last Price Stop Loss.

Logical Condition Stop Condition (tag 5255) Cash I	UY Cash SELL
--	--------------





In BUY: Last Price >= Stop Price In SELL: Last Price <= Stop Price	0 or not specified	Last Price Stop Loss	Last Price Stop Loss
Bid Price >= Stop Price	1	Reject: <i>Trigger Mechanism</i> undefined	Best Price Take Profit
Bid Price <= Stop Price	2	Reject: <i>Trigger Mechanism</i> undefined	Best Price Stop Loss
Ask Price >= Stop Price	3	Best Price Stop Loss	Reject: <i>Trigger Mechanism</i> undefined
Ask Price <= Stop Price	4	Best Price Take Profit	Reject: <i>Trigger Mechanism</i> undefined
Last Price >= Stop Price	5	Last Price Stop Loss	Last Price Take Profit
Last Price <= Stop Price	6	Last Price Take Profit	Last Price Stop Loss

3.1.2.8 Unpriced Limit Order

(Tag 40 = X) Unpriced limit order is an order with a price limit that is automatically determined on the basis of the best bids and offers displayed. More specifically, the price limit is set at a price of a tick better than the best bid-ask present in the book at the time the order is entered. This type of order may only be entered during continuous trading, and will follow the same behaviour as that provided for in the case of limit orders.





3.1.3 Outgoing Messages

3.1.3.1 Order Cancel Reject (MsgType=9)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Υ
41	OrigClOrdID	ClOrdID of the previous order, used to identify the previous order in cancel and cancel/replace requests	String (32)	Y
39	OrdStatus	OrdStatus value after this cancel reject is applied	Char	Y
37	OrderID	Unique identifier for order (Market HUB orderid)	String	Y
434	CxlRejResponseTo	Identifies the type of request that a Cancel Reject is in response to Defined in FIX 4.2 and higher versions	Integer	N
102	CxlRejReason	Code to identify reason for cancel rejection	Float	N
58	Text	Free format text string For more details see Section 3.1.2.4	String	N





3.2 Execution Report (MsgType=8)

Tag	Field Name	Content	Data Type	Req
11	ClOrdID	Unique identifier for order as assigned by the buy side.	String (32)	Y
41	OrigClOrdID	ClOrdID of the previous order, used to identify the previous order in cancel and cancel/replace requests	String (32)	N
1	Account	Account as agreed between broker and institution	String (32)	Y
54	Side	Side of order	Char	Υ
		1 = Buy		
		2 = Sell		
		5 = Short Sell		
		6 = Short Sell Exempt		
		H = Undisclosed Sell		
38	OrderQty	Number of shares ordered	Integer	Y
44	Price	Price per share. Required for limit order types	Float	N
99	StopPx	Required for OrdType= Stop/Stop limit	Float	N
15	Currency	Currency used for price	String	N
		Required if tag 100=X00 (for more details see <u>Section 4</u>).	(3)	





Tag	Field Name	Content	Data Type	Req
40	OrdType	Order type	Char	N
		Valid values:		
		1 = Market (Any Price)		
		2 = Limit		
		3 = Stop		
		4 = Stop limit		
		5 = Market on close		
		6 = With or without (odd-lot)		
		7 = Limit or better (Market To Limit)		
		B = Limit on close		
		P = Pegged		
		X = Unpriced limit		
		For more details on Odd-lots see Section 3.1.2.2.		
		For more details on Market to Limit and Any Price Orders see <u>Section</u> 3.1.2.1.		
		For more details on Unpriced Limit see <u>Section 3.1.2.8</u>		
37	OrderID	Unique identifier for order (Market HUB orderid)	String	Y
20	ExecTransType	Identifies transaction type	Char	Υ
		Defined in FIX 4.2 and lower versions		





Tag	Field Name	Content	Data Type	Req
150	ЕхесТуре	Describes the specific ExecutionRpt (i.e. Pending Cancel) while OrdStatus always identifies the current order status	Char	Y
		Valid values:		
		0 = New		
		1 = Partial fill (Replaced in FIX 4.4)		
		2 = Fill (Replaced in FIX 4.4)		
		3 = Done for day		
		4 = Canceled		
		5 = Replaced		
		6 = Pending Cancel		
		8 = Rejected		
		A = Pending New		
		C = Expired		
		The following value is defined in FIX 4.2 and higher versions:		
		E = Pending Replace		
		The following values are defined in FIX 4.3 and higher versions:		
		F = Trade (partial fill or fill)		
		G = Trade Correct (formerly an ExecTransType)		
		H = Trade Cancel (formerly an ExecTransType)		
		I = Order Status (formerly an ExecTransType)		
		The following value is defined in FIX 4.1 and higher versions:		
		L = Trigger or Activated by System (for details see <u>Section 3.2.1.3</u>)		
17	ExecID	Unique identifier of execution message	String	Y
31	LastPx	Price of this (last) fill	Float	N
		Field not required when tag 20=3		
32	LastQty	Quantity of this (last) fill	Qty	N
		Field not required when tag 20=3		
6	AvgPx	Calculated average price of all fills on this order.	Float	Υ
14	CumQty	Total number of executed shares.	Integer	Υ





Tag	Field Name	Content	Data Type	Req
18	ExecInst	MiFID – Best Execution Indicator	String	N
		Valid values:		
		A = Internalization forbidden		
		B = Internalization allowed		
		Not set or other values = as set in the Execution Policy.		
		Required for pegged orders on Chi-X (tag $40 = P$).		
		Valid values (mutually exclusive):		
		P = Market Peg		
		R = Primary Peg		
		M = Mid-price Peg		
151	LeavesQty	Amount of shares open for further execution.	Integer	Υ
		Defined in FIX 4.1 and higher versions		
39	OrdStatus	Identifies current status of order	Char	Υ
		Valid values:		
		0 = New		
		1 = Partially filled (Replaced in FIX 4.4)		
		2 = Filled (Replaced in FIX 4.4)		
		3 = Done for day		
		4 = Canceled		
		5 = Replaced		
		6 = Pending Cancel		
		8 = Rejected		
		A = Pending New		
		C = Expired		
		The following value is defined in FIX 4.2 and higher versions:		
		E = Pending Replace		





Tag	Field Name	Content	Data Type	Req
432	ExpireDate	Date of order expiration (AAAAMMDD).	String	N
		Conditionally required if tag 59=6 and ExpireTime (tag 126) is not specified.		
		<u>Defined in FIX 4.2 and higher</u> <u>versions</u>		
126	ExpireTime	Time/Date of order expiration.	String	N
		Conditionally required if tag 59=6 and ExpireDate (tag 432) is not specified.		
528	OrderCapacity	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	Y
		Default=Third Party order.		
		Valid values:		
		G = Proprietary		
		<u>Defined in FIX 4.3 and higher</u> <u>versions</u>		
47	Rule80A	Indicates if the order is entered by the Buy side on their own account (Proprietary) or for a Third Party.	Char	N
		Default=Third Party order.		
		Valid values:		
		P = Proprietary		
		Defined in FIX 4.2 and lower versions		
453	NoPartyIDs	Number of PartyID (448), PartyIDSource (447), and PartyRole (452) entries	Integer	N
		Defined in FIX 4.3 and higher versions		
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	N
		<u>Defined in FIX 4.3 and higher</u> <u>versions</u>		
447	PartyIDSource	Identifies class of the PartyID (448) value	Char	N
		D = Proprietary/Custom code		
		Defined in FIX 4.3 and 4.4		





Tag	Field Name	Content	Data Type	Req
452	PartyRole	Identifies the type or role of the PartyID	Integer	N
		Valid Value		
		3 = ClientID		
		10 = Settlement Location (formerly FIX 4.2 SettlLocation)		
		17 = Contra Firm		
		<u>Defined in FIX 4.3 and higher</u> <u>version</u>		
63	SettImntTyp/ SettIType	Indicates order settlement period. If present, tag 64 (SettlDate) overrides this field. If both tag 63 and tag 64 are omitted, the default SettlType is 0 (Regular).	Char	N
		Valid values:		
		6 = Future		
64	SettIDate	Specific date of trade settlement (SettlementDate) in YYYYMMDD format. If present, this field overrides tag 63 (SettlType). Required if tag 63=6.	String	N
103	OrdRejReason	Code to identify reason for order rejection	Integer	N
58	Text	Free format text string	String	N
		For more details see <u>Section 3.1.2.4</u>		
		Contains the error message for execution report with tag 39=8		
60	TransactTime	Time of execution/order creation (expressed in UTC, also known as GMT) in microsecond	String	N
		UTC TimeStamp:		
		20030620-10:06:51.000000		
		<u>Defined in FIX 4.2 and higher</u> <u>versions</u>		
301	LastMkt	Market of execution for last fill (ExecType=Partial fill/Fill) or an indication of the market where an order was routed (ExecType=New). For more details see Section 8	String	N

 $^{^{1}}$ If there are executions on more than one market, indicates the "principal" market or the real market of execution





Tag	Field Name	Content	Data Type	Req
29	LastCapacity	Broker capacity in order execution.	Char	N
		Valid values:		
		1 = Agent		
		2 = Cross as agent		
		4 = Principal		
75	TradeDate	Indicates date of trade referenced in this message in YYYYMMDD format. Absence of this field indicates current day.	String	N
5024	NFW Internalization	MiFID – Internalization Indicator.	Char	N
	Indicator	Valid values:		
		0 = Default, as fixed in the Execution Policy		
		2 = Proprietary, the internalization by matching with Banca IMI		
		4 = No internalization – Execution only on regulated market or MTF		
109	ClientID	Firm identifier used in third party- transactions	String	N
		Defined in FIX 4.2 and lower versions		
12	Commission	Fees Amount	Float	N
13	CommType	Commission type.	Char	N
		Valid values:		
		3 = Absolute		
136	NoMiscFees	Number of repeating groups of miscellaneous market fees	Int	N
137	MiscFeeAmt	Miscellaneous market fee value. It includes eventual Financial Transaction Tax	Amt	N
155	SettlCurrFxRate	Foreign exchange rate used to compute SettlCurrAmount from Currency to SettlCurrency	Float	N
120	SettlCurrency	Currency code of settlement denomination	String	N
7001	SettlLocation	Country referring to the central depository where the security will be settled. Valid values include all the ISO 3166 Codes, the value "LU" indicates Euroclear/Clearstream	String	N





Tag	Field Name	Content	Data Type	Req
851	LastLiquidityInd	Indicator to identify whether this fill was a result of a liquidity provider providing or liquidity taker taking the liquidity.	Int	N
		1 = Added Liquidity		
		2 = Removed Liquidity		
		** It is possible to use tag 851 or 1057 not both on same message		
1057	AggressorIndicator	Used to identify whether the order initiator is an aggressor or not in the trade.	Boolean	N
		Y = Order initiator is aggressor		
		N = Order initiator is passive		
		** It is possible to use tag 851 or 1057 not both on same message		
Rpt group 2668	NoTrdRegPublication s	Number of regulatory publication rules in repeating group.	Int	N
2669	TrdRegPublicationTy pe	0 (Pre-trade transparency waiver)	Int	N





Tag	Field Name	Content	Data Type	Req
2670	TrdRegPublicationRe ason	TrdRegPublicationType(2669) = 0 and TrdRegPublicationReason(2670), mappings for the waiver flag values:	Int	N
		RFPT: TrdRegPublicationReason(2670) = 3 (No public price preceding order as public reference price was used for matching orders)		
		NLIQ: TrdRegPublicationReason(2670) = 0 (No preceding order in book as transaction price set within average spread of a liquid instrument)		
		OLIQ: TrdRegPublicationReason(2670) = 1 (No preceding order in book as transaction price depends on system-set reference price for an illiquid Instrument)		
		PRIC: TrdRegPublicationReason(2670) = 2 (No preceding order in book as transaction price is subject to conditions other than current market price)		
		SIZE: TrdRegPublicationReason(2670) = 5 (No public price quoted as order size is above standard market size)		
		ILQD: TrdRegPublicationReason(2670) = 4 (No public price quoted as instrument is illiquid		
		LRGS: TrdRegPublicationReason(2670) = 9 (No public price and/or size quoted as transaction is "large in scale")		





3.2.1 Execution Report Customizations

3.2.1.1 FIX 4.0 Exec Type and Order Status

Tag 150 (ExecType) is defined in FIX 4.1 and higher versions. The tag indicates the type of execution report and assumes at least the same values as tag 39 (OrdStatus).

Tag 150 solves the ambiguities regarding the status of orders in some particular cases, like when a cancel request is received in FIX 4.0 on a partially filled order (tag 39=1). In this case, Market HUB should send an execution report with tag 39=6 (Pending Cancel). However, since the FIX protocol sets some priorities regarding the state of the order the tag 39 is rather valued as "1 = Partially Filled" than "6 = Pending Cancel". Therefore the client might interpret the execution report as another partial fill rather than the answer to the Order Cancel Request.

Market HUB uses the tag 103 (OrdRejReason) to avoid ambiguity in FIX 4.0. In the above mentioned example, the execution message would contain both the tags 39 and 103 with the following values:

- OrdStatus (tag 39): 1 = Partially Filled
- OrdRejReason (tag 103): 6 = Pending Cancel

If requested by the Buy Side, Market HUB can be configured to use only the tag 39 with a fixed value of 6 = Pending Cancel.

3.2.1.2 Expiration of orders

The expiration of an order is notified by Market HUB by sending an Execution Report message with tag 150 valued in one of the following ways:

- Cancelled (tag 150 = 4)
- Expired (tag 150 = C)
- Done for Day (tag 150 = 3)

A "Done for Day" message may also be generated as in the standard FIX protocol by using an appropriate configuration.

3.2.1.3 Stop Order activation

Market HUB can be configured upon request to notify the activation of a Stop Order by sending an Execution Report message with tag 150=L. The stop activation message would be sent after the NewOrder message (150=0).

3.2.1.4 SettlLocation

Market HUB can be configured upon request to use the tag SettlLocation (7001) which indicates the Settlement Circuit by using ISO 3166 Codes.





4 BEST EXECUTION

Orders sent in Best Execution must have the tag 100 (ExDestination) valued as "X00". Also, the tag 15 (Currency) must always be valued, otherwise the order will be refused. All the order types indicated for tags 40 and 59 are supported in Best Execution.

The quantity, time and order type parameters, as with other tags specified in the message "New Order Single" (for example Currency or SecurityID), may limit the set of possible markets considered for Best Execution. Other optional instructions for Best Execution (*Execution Policy*) may be indicated in the following tags:

• **Internalization Indicator** (tag 18): indicates whether the internalization of an order is authorized or not.

Value	Description
Not Set	As set in the Execution Policy
Α	Internalization forbidden
В	Internalization allowed

• **Best Execution Indicator** (tag 5026): defines the priority of the Execution Quality factors. Absence of this field indicates *0 – Default*.

Value	Description	
	Default (The hierarchy provided by the Execution	
0	Policy is applied; in respect to the Buy side's	
	classification and to the asset class)	
1	Highest priority to Total Consideration	
2	Highest priority to Speed of Execution	
3	Highest priority to Probability of Execution	

- **SettlLocation** (tag 7001): Country referring to the central depository where the security will be settled. Valid values include all the ISO 3166 Codes, the value "LU" indicates Euroclear/Clearstream.
- MutiMarket Best Execution: It doesn't require a specific TAG to use this
 functionality. The order will be managed with Multi execution if quantity
 matches with system parameters. These parameters changes for instruments
 and Market.





5 ORDER SWEEPING

The Best Execution model is not applied to limited orders which cannot be immediately executed under prevailing market conditions at the time of receipt. According to the Execution Policy these orders are sent to the reference market of the financial instrument subject of the order.

In order to increase the likelihood of execution of such orders the market conditions on other strategic markets, where the financial instrument is traded, are continuously monitored. In case of a change on market conditions on one of the monitored markets, which allow for partial o complete fill, the other is moved from the actual market to the new one.

It is possible to specify when an Execution Report with 150=0 (New) must be sent for these sweeping orders:

- No NewOrder message is sent
- Only the first time the order is sent to a market. It is possible also to configure the tag 30 (LastMkt) in the following way:
 - Tag absent
 - Specific market code according to different encodings configured (MIC, Reuters, Custom)
 - o Generic market code, custom value "XXX"
- Every time the order is sent to a market. In this case the tag 30 (LastMkt) contains the market code according to different encodings configured (MIC, Reuters, Custom).





6 COUNTERPARTY IDENTIFICATION

A single FIX session could be used for multiple Buy side clients and the sell side might be required to identify the different accounts used for trading. In some cases specifying the SenderCompID (tag 49) and SenderSubID (tag 50) might be sufficient. However, in case of Networks or Hubs other tags are needed to identify the Buy side.

6.1 Identifiers

The initial identification is done by using the following two fields in the message header:

- SenderCompId (tag 49)
- SenderSubId (tag 50)

Other tags that may be used for identification purposes, according to the agreement between Banca IMI and the Buy side, are:

- PartyID (tag 448): defined in FIX 4.3 and higher versions (part of the repeating group Parties)
- ClientId (tag 109): defined in FIX 4.2 and lower versions
- OnBehalfOfCompId (tag 115)
- OnBehalfOfSubId (tag 116)
- Account (tag 1)

A combination of several tags is allowed and some tags might be mandatory, even though not required by the FIX protocol, if indicated by the Buy side as identifiers. Specific Buy side or Default Buy side tags can also be defined.





7 Instrument Identification

7.1 General behavior

The following tags are used on Market HUB to define the instrument subject of an order:

- SecurityID (tag 48), <u>always required</u>, possible values:
 - o ISIN/sedol for securities
 - o ISIN of the underlying for derivatives
- **IDSource** (tag 22), <u>always required</u>, valued accordingly to tag 48:
 - o 2 = Sedol
 - 4 = ISIN

If tags 22 and 48 are not specified, the following tag is required:

- Symbol (tag 55), possible values:
 - o Ticker symbol

7.2 Best Execution

Clients wishing to send orders in Best Execution must always specify the tag 22 and tag 48. Orders sent in Best Execution without these two tags will always be refused.





8 Market Code

8.1 Markets Supported

Market HUB supports three main standard configuration encodings:

- MIC
- REUTEURS
- DRG

Market HUB allows the Buy side to customize the way markets are identified by using tags 100 and 30.

The Execution Report sent to notify trades generated by Best Execution identifies the market of execution by its MIC code indicated in tag 30.

There is an exception to this rule for the REX/OFF REX markets, which do not have a real MIC Code, so the default values are L_REX/L_OFFREX.

The MIC Code rule is always applied in the absence of a customatization by the Buy side for the identification of the market of execution.

8.2 Alternative Markets

The use of tags 100 and 30 allows the Buy side not to specify the real market when it is not known. Instead, the market will be identified by Market HUB based on a series of logical analyses:

- Possibility of execution on one or more markets
- · Time of reception of the order
- Priority of a market in relation to the markets configured

Example:

The Reuters codification identifies all the Italian markets with a single code MI. Although custom values are defined to distinguish between the Italian markets, some Buy sides might not be able to indicate the market as expected by the codification.





9 APPENDIX FIX ATDL

Through FIX ATDL, clients have the possibility to insert a Care Order specifing an execution strategy between the strategy available in MarketHUB platform.

FIX ATDL is a strandard protocol that allows to define strategies and related parameters.

The table below details the fields handled in the FIX ATDL functionality

VWAP_ATDL STRATEGY

Tag	Field Name	Content	Data Type	Req
30000	StrategyIdentifierTag	Identifier for FIXATDL Strategies. Values = VWAP_ATDL	String	Y
30100	EndTime	Strategy end time (market time) – UTCTIMESTAMP	String	Υ
30102	QuoteRequested	Quote enabled: Values: 1 -> YES 2 -> NO	Int	N
30107	NQuoteLevel	Num Quotes	Int	N
30103	LimitPercExec	Percentage execution limit compared to the theoretical curve	Float	N
30104	MinimumQuantity	Release quantity	Float	Y

TimeSpread_ATDL STRATEGY

Tag	Field Name	Content	Data Type	Req
30000	StrategyIdentifierTag	Identifier for FIXATDL Strategies. Values = TimeSpread_ATDL	String	Y
30100	EndTime	Strategy end time (market time) – UTCTIMESTAMP	String	Y
30102	QuoteRequested	Quote enabled: Values: 1 -> YES 2 -> NO	Int	N
30103	LimitPercExec	Percentage execution limit compared to the theoretical curve	Float	N
30104	MinimumQuantity	Release quantity	Float	Υ





VolumeSimple_ATDL STRATEGY

Tag	Field Name	Content	Data Type	Req
30000	StrategyIdentifierTag	Identifier for FIXATDL Strategies. Values = VolumeSimple_ATDL	String	Y
30101	VolumeLimitPrice	Volume Limit price	Float	N
30105	VolumePercent	Participation percentage	Float	Y
30102	QuoteRequested	Quote enabled: Values: 1 -> YES 2 -> NO	Int	N
30106	LimitPercExec	Percentage execution limit compared to the participation percentage	Float	N

Best_ATDL STRATEGY

Tag	Field Name	Content	Data Type	Req
30000	StrategyIdentifierTag	Identifier for FIXATDL Strategies. Values = Best_ATDL	String	Y
30100	EndTime	Strategy end time (market time) – UTCTIMESTAMP	String	Y
30104	MinimumQuantity	Release quantity	Float	Υ
30108	HitQtyType	HitType. Values: 0 -> Release (Default) 1 -> Book 2 -> NoHit	Int	N