MDP 3.0 - Market Data Snapshot Full Refresh

This topic provides the MDP 3.0 Market Data Snapshot Full Refresh message specification. The following layout details are described:

Message Body

Tag	Name	FIX Type	Enumeration	Req	Description
369	LastMsgSeqNumProcessed	SeqNum		Y	The last processed packet sequence number of the real-time channel as of the time the snapshot was generated. This value is used to synchronize the snapshot with the real-time feed.
911	TotNumReports	Int		Y	Total number of instruments replayed in the loop.
48	SecurityID	Int		Y	Unique Security ID. The unique instrument ID value will not be reused until the next trade date following an instrument expiration or deletion.
83	RptSeq	Int		Y	Sequence Number of the last Instrument Entry reflected in the message.
37709	NoChunks	uInt32		C	Total number of packets that constitute a single instrument order book.
37710	CurrentChunk	uInt32		C	Chunk sequence.
60	TransactTime	UTCTimestamp		Y	Start Transaction Time of the last event security participated in. UTC Timestamps are sent in number of nanoseconds since Unix epoch synced to a master clock to microsecond accuracy.
1682	MDSecurityTradingStatus	Int	21=Pre Open 15=New Price Indication 17=Ready to trade (start of session) 2=Trading halt 18=Not available for trading 4=Close 26=Post Close 20=Unknown or Invalid 24 = Pre-Cross 25 = Cross	N	Identifies the current state of the instrument.
75	TradeDate	LocalMktDate		Y	Indicates the date of the trade session. Sent as number of days since Unix epoch (Jan. 1, 1970) local time.
779	LastUpdateTime	UTCTimestamp		Y	Date and Time of Last Security Definition Add/Modify or Delete on a given channel. UTC Timestamps are sent in number of nanoseconds since Unix epoch synced to a master clock to microsecond accuracy. **Note:** If the client system experiences a mid-week failure, this tag value can be used to identify if any instrument updates have been missed.
1149	HighLimitPrice	Price		C	Upper price threshold for the instrument. Orders submitted with prices above the upper limit will be rejected.
1148	LowLimitPrice	Price		C	Lower price threshold for the instrument. Orders submitted with prices below the lower limit will be rejected

1143	MaxPriceVariation	Price		C	Differential static value for price banding. In continuous trading mode: Buy orders submitted above (Last Best Price + Max Price Variation) will be rejected. Sell orders submitted bellow (Last Best Price - Max Price Variation) will be rejected. **Note:** Max Price Variation will not be provided for option instruments with dynamic Price Banding Values.
268	NoMDEntries	NumIn Group		Y	Indicates number of repeating groups and length of each repeating group in Market Data message.

Market by Price (MBP) Data Block

Tag	Name	FIX Type	Enumeration	Req	Description
269	MDEntryType	Char	0 = Bid 1 = Offer E = Implied Bid F = Implied Offer 2 = Trade 4 = Opening Price 6 = Settlement Price 7 = Session High Trade Price 8 = Session Low Trade Price N = Session High Bid O = Session Low Offer B = Cleared Trade Volume C = Open Interest W = Fixing Price e = Electronic Volume	Y	Market Data Entry Type.
270	MDEntryPx	Price		C	Price of the MD Entry.
271	MDEntrySize	Qty		C	Quantity of the MD Entry. In a Book Entry– order quantity In a Trade Entry – traded quantity In Electronic Volume represents cumulative traded volume of the Daily Trade session.
346	NumberOfOrders	Int		C	Aggregate number of orders at the given price level.
1023	MDPriceLevel	Int		C	Aggregate book position. Any number from 1 to 10 is acceptable.
286	OpenCloseSettlFlag	Int	0 = Daily Open Price 5 = Indicative Opening Price (IOP)	C	Condition describing a quote, trade or statistic entry

731	SettlPriceType	String	Examples: 00000111 – Final Actual Settlement at Trading Tick 00000101 – Final Theoretical Settlement at Trading Tick 00000100 – Preliminary Settlement at Trading Tick 00000000 – Preliminary Settlement at Clearing Tick	C	Bitmap field of eight Boolean type indicators representing settlement price type: Bit 0: (least significant bit): 1=Final 0=Preliminary Bit 1: 1=Actual 0=Theoretical or Undefined **Note:** Typically, there are two rounds of preliminary settlement prices disseminated. The early round of preliminary settlement prices will have Bit 1 set to 0 (Undefined). Bit 2: 1=Settlement at Trading Tick 0=Settlement at Clearing Tick Bit 3: 1=Intraday 0=Undefined Bit 4-6: Reserved for future use, set to 0 Bit 7: 0=not NULL 1=entire set is a NULL
5796	TradingReferenceDate	LocalMktDate		C	Date of trade session corresponding to a statistic entry. Sent in number of days since Unix epoch.

Market by Order (MBO) Data Block

Tag	Name	FIX Type	Enumeration	Req	Description
37	OrderID	Int		C	Unique ID assigned by CME Globex to identify orders.
269	MDEntryType	Char	0 = Bid 1 = Offer	Y	Market Data Entry Type.
270	MDEntryPx	Price		C	Price of the MD Entry.
37706	MDDisplayQty	Qty		C	Visible quantity of an order to the market. Orders may have additional hidden display quantity.
37707	MDOrderPriority	Int		C	Order priority for execution on the order book. A lower value is a higher priority. Value is unique for all orders within a market segment and assigned for all orders.

Snapshot Entry Tag Usage

Tag	Tag Name	MBP Customer Order Book	MBO Customer Order Book (MBO Only SBE Template)	Implied Book	New Trade	Event Summary	High Low Trade	High Low Bid	IOP/ Open	Settle	Cleared Volume	Open Interest	Fixing Price
269	MDEntryType	0, 1	0, 1	E, F	2	e	7, 8	N, O	4	6	B	C	W
270	MDEntryPx	X	X	X	X	-	X	X	X	X	-	-	X
271	MDEntrySize	X	-	X	X	X	-	-	-	-	X	X	-
1023	MDPriceLevel	X	-	X	-	-	-	-	-	-	-	-	-
286	OpenCloseSettlFlag	-	-	-	-	-	-	-	5, 0	-	-	-	-
731	SettlPriceType	-	-	-	-	-	-	-	-	X	-	-	-
346	NumberOfOrders	X	-	-	-	-	-	-	-	-	-	-	-
5796	TradingReferenceDate	-	-	-	-	-	-	-	-	X	X	X	X

1149	HighLimitPrice	-	-	-	-	-	-	-	-	-	-	-	-
1148	LowLimitPrice	-	-	-	-	-	-	-	-	-	-	-	-
1143	MaxPriceVariation	-	-	-	-	-	-	-	-	-	-	-	-
37	OrderID	-	X	-	-	-	-	-	-	-	-	-	-
37707	MDOrderPriority	-	X	-	-	-	-	-	-	-	-	-	-
37706	MDDisplayQty	-	X	-	-	-	-	-	-	-	-	-	-