CME Group

CME Legacy FIX/FAST

Market Data Message Specification

12/2/2015

Futures trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade.

All references to options refer to options on futures.

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Legacy Market Data - Message Specification

CME Globex market data is sent in the FIX format. The CME Market Data FIX Message Specification includes:

- FIX Header (across messages)
- Heartbeat (tag 35-MsgType=0)
- Logout (tag 35-MsgType=5)
- Logon (tag 35-MsgType=A) - Customer to CME
- Logon (tag 35-MsgType=A) - CME to Customer
- Security Definition (tag 35-MsgType=d)
- Security Status (tag 35-MsgType=f)
- Market Data - Quote Request (tag 35-MsgType=R)
- Market Data Request (tag 35-MsgType=V)
- Market Data Snapshot Full Refresh (tag 35-MsgType=W)
- Market Data Incremental Refresh (tag 35-MsgType=X)

FIX/FAST Repeating Tag Groups

In the FIX/FAST message specification certain messages contain repeating groups of tags. Repeating group tags can appear multiple times in a given message depending upon the information transmitted. For example, the Security Definition (tag 35-MsgType=d) for an options butterfly strategy would contain the tag 600-LegSymbol group three times, one for each leg of the strategy. Repeating group tags are indicated by the arrow '→' symbol. The repeating group begins with the first ocurrence of the arrow symbol and concludes with the last.

FIX/FAST Tag Formats

The format of each tag indicates the data type and maximum length for the tag value. Data types are defined by the FIX protocol as follows.

Data Type	Description
Int	Sequence of digits without commas or decimals and optional sign character (ASCII characters "-" and "0" - "9"). The sign character utilizes one byte (i.e. positive int is "99999" while negative int is "-99999"). Note that int values may contain leading zeros (e.g. "00023" = "23"). Examples: 723 in field 21 would be mapped int as 21=723 -723 in field 12 would be mapped int as 12=-723

Float	Sequence of digits with optional decimal point and sign character (ASCII characters "-", "0" - "9" and "."); the absence of the decimal point within the string will be interpreted as the float representation of an integer value. All float fields must accommodate up to fifteen significant digits. The number of decimal places used should be a factor of business/market needs and mutual agreement between counterparties. Note that float values may contain leading zeros (e.g. "00023.23" = "23.23") and may contain or omit trailing zeros after the decimal point (e.g. "23.0" = "23.0000" = "23" = "23."). Note that fields which are derived from float may contain negative values unless explicitly specified otherwise. The following data types are based on float. • **Qty** - float field capable of storing either a whole number (no decimal places) of "lots" (securities denominated in whole units) or a decimal value containing decimal places for non-share quantity asset classes (securities denominated in fractional units).Price - float field representing a price. Note the number of decimal places may vary. For certain asset classes prices may be negative values. For example, prices for options strategies can be negative under certain market conditions. • **PriceOffset** - float field representing a price offset, which can be mathematically added to a "Price". Note the number of decimal places may vary and some fields such as LastForwardPoints may be negative. • **Amt** - float field typically representing a Price times a Qty. • **Percentage** - float field representing a percentage (e.g. 0.05 represents 5% and 0.9525 represents 95.25%). Note the number of decimal places may vary.
Char	Single character value, can include any alphanumeric character or punctuation except the delimiter. All char fields are case sensitive. The following data type is based on Char. • **Boolean** - A character field containing one of two values: 'Y' = True/Yes, 'N' = False/No

String	Alpha-numeric free format strings, can include any character or punctuation except the delimiter. All char fields are case sensitive (i.e. morstatt ¹ Morstatt). **MultipleStringValue** - String field containing one or more space delimited multiple character values. **Currency** - String field representing a currency type. **Exchange** - String field representing a market or exchange. **UTCTimestamp** - Time/date combination represented in UTC (Universal Time Coordinated, also known as 'GMT') in either YYYYMMDD-HH:MM:SS (whole seconds) or YYYYMMDD-HH:MM:SS.sss (milliseconds) format. Colons, dash, and period are required. *Valid values:* - YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-60 (60 only if UTC leap second) (without milliseconds). - YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-60 (60 only if UTC leap second), sss=000-999 (indicating milliseconds). *Leap Seconds:* Note that UTC includes corrections for leap seconds, which are inserted to account for slowing of the rotation of the earth. Leap second insertion is declared by the International Earth Rotation Service (IERS) and has, since 1972, only occurred on the night of Dec. 31 or Jun 30. The IERS considers March 31 and September 30 as secondary dates for leap second insertion, but has never utilized these dates. During a leap second insertion, a UTCTimestamp field may read "19981231-23:59:59", "19981231-23:59:60", "19990101-00:00:00". (see http://tycho.usno.navy.mil/leapsec.html) **UTCTimeOnly** - Time-only represented in UTC (Universal Time Coordinated, also known as "GMT") in either HH:MM:SS (whole seconds) or HH:MM:SS.sss (milliseconds) format, colons, and period required. *Valid values*: - HH = 00-23, MM = 00-59, SS = 00-59. (without milliseconds) - HH = 00-23, MM = 00-59, SS = 00-59. sss=000-999 (indicating milliseconds).* LocalMktDate - Date of Local Market (vs. UTC) in YYYYMMDD format. Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31. **UTCDate** - Date represented in UTC (Universal Time Coordinated, also known as "GMT") in YYYYMMDD format. Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31. - MonthYear - char field representing month of a year in YYYYMM format. Valid values: YYYY = 0000-9999, MM = 01-12.
Data	String field containing raw data with no format or content restrictions. Data fields are always immediately preceded by a length field. The length field should specify the number of bytes of the value of the data field (up to but not including the terminating SOH). Caution: the value of one of these fields may contain the delimiter (SOH) character. Note that the value specified for this field should be followed by the delimiter (SOH) character as all fields are terminated with an "SOH".

Market Data - FIX Header Across Messages

The header is common across all FIX/FAST CME Globex market data messages.

Tag	FIX Name	Valid Values	Format	Description
9	BodyLength		length	Message length in bytes.
34	MsgSeqNum		SeqNum (9)	Integer message sequence number.
35	MsgType	0=Heartbeat 5=Logout A=Logon d=Security Definition f=Security Status R=Quote Request V=Market Data Request W=Market Data Snapshot Full Refresh X=Market Data Incremental Refresh Y=Market Data Request Reject	String (2)	Defines message type.

43	PossDupFlag	Y=Possible duplicate N=Original transmission	Boolean (1)	This tag is used in cases of CME internal component failure to indicate a possible retransmission of a duplicate message with the same sequence number. This tag is important in instances where a message is received with duplicate sequence numbers. CME will resend messages to guarantee all messages reach client systems. Two messages will not be sent with the same sequence number without this flag on at least one of them. In addition, it is possible to miss the original transmission and see the possible duplicate only.
49	SenderCompID	CME	String (7)	Assigned value used to identify firm sending message.
52	SendingTime		UTCTimestamp (21)	Time of message transmission, always expressed in UTC (Coordinated Universal Time).
369	LastMsgSeqNumProcessed		SeqNum (9)	SNAPSHOT ONLY. The last processed tag 34-MsgSeqNum value 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.
1128	ApplVerID	9=FIX50SP2	String (1)	Specifies the service pack release being applied at message level.

Market Data - Heartbeat

The Market Data Heartbeat (tag 35-MsgType=0) message is used to ensure connectivity only.

- There is no body for this message.
- This message is only the header with the message type '0'.
- This message is sequenced as all other CME Globex market data messages.

Market Data - Logout

The Market Data Logout (tag 35-MsgType=5) message is sent to confirm logout.

Tag	FIX Name	Valid Values	Format	Description
1180	ApplID	REPLAY	String (50)	This tag is sent only on the REPLAY feed. Identifies a regular message versus a replayed message on the TCP Replay feed. Note: Previously named 'ApplFeedID'.
58	Text		String (180)	Free format text string. May include logout confirmation or reason for logout.

Market Data - Logon Customer to CME

The Market Data Logon (tag 35-MsgType=A) message from the client system to MDP is sent by the client system to initiate logon.

Tag	FIX Name	Valid Values	Format	Description
553	Username		String (100)	Userid or username.
554	Password		String (100)	Password or passphrase.
1137	DefaultApplVerID	9=FIX502SP2	String (1)	Specifies the service pack release being applied, by default, to message at the session level.

Market Data - Logon CME to Customer

The Market Data Logon (tag 35-MsgType=A) message is sent from MDP to the client system to confirm logon.

Tag	FIX Name	Valid Values	Format	Description
1180	ApplID	REPLAY	String (50)	The REPLAY feed. Used to identify a regular message versus a replayed message on the TCP Replay feed. Previously named ApplFeedID.
98	EncryptMethod	0=None	Int (1)	CME Group does not use encryption, so this value is always set to '0'.
108	HeartBtInt		Int (3)	Heartbeat interval (seconds).
1137	DefaultAppLVerID	9=FIX50SP2	String (1)	Specifies the service pack release being applied, by default, to messages at the session level.

Market Data - Security Definition

The market data Security Definition (tag 35-MsgType=d) message identifies the instrument and provides all instrument attributes such as expiration, strike price, etc.

The → symbol indicates a repeating group tag.

Tag	FIX Name	Valid Values	Format	Description
911	TotNumReports		Int(9)	Total number of reports returned in response to a request.
864	NoEvents		NuminGroup(5)	Number of repeating EventType entries.
→865	EventType	5=Activation 7=Last eligible trade date	Int(1)	Code to represent the type of event.
→866	EventDate		LocalMktDate(8)	Date of event.
→1145	EventTime		UTCTimestamp(12)	Time of event.
1150	TradingReferencePrice		Price(20)	The most recent settlement price. Tag 5796-TradingReferenceDate provides the date of the price. Tag 731-SettPriceType provides the type of settlement the price represents.

731	SettlPriceType	1=Final 2=Theoretical 100 = Actual Preliminary for instruments not subject to settlement price rounding; Rounded Preliminary for instruments subject to settlement price rounding (e-mini, e-micro, and miNY products) 101=Actual Preliminary for instruments subject to settlement price rounding (e-mini, e-micro and e-miNY products).	String(3)	Indicates whether settlement price is preliminary or final.
1149	HighLimitPrice		Price(20)	Upper price threshold for the instrument. Orders submitted with prices above the upper limit will be rejected.
1148	LowLimitPrice		Price(20)	Lower price threshold for the instrument. Orders submitted with prices below the lower limit will be rejected.
1151	SecurityGroup		String(6)	Product Code.
55	Symbol		String(6)	Instrument Group Code.
827	ExpirationCycle	0=Expire on Trading Session Close 2=Expiration at given date	Int(1)	Indicates if the instrument expires at the trading session close, or at a specified last eligible trade date. If '0', the instrument is eligible for Day orders only. If '2', the instrument is eligible for GTC/GTD orders (outrights only). Note that Last Eligible Trade Date is expressed using tag 865-EventType, tag 866-EventDate and tag 1145-EventTime.

107	SecurityDesc		String(20)	Instrument Name.
48	SecurityID		Int(12)	Unique instrument ID as qualified by the exchange per tag 22-SecurityIDSource.
22	SecurityIDSource	8=Exchange symbol	String(1)	Identifies source of tag 48-SecurityID value. This value is always 8 for CME is required if tag 48-SecurityID is specified.
461	CFICode	See CFICode Table of Valid Values	String(6)	Indicates the type of security using ISO 10962 standard, Classification of Financial Instruments (CFI code) values. ISO 10962 is maintained by ANNA (association of National Numbering Agencies) acting as registration Authority. Note that BM&F CFICodes do not follow these conventions and are listed in BM&F Tag 461-CFICode Table of Valid Values.
462	UnderlyingProduct	2=Commodity/Agriculture 4=Currency 5=Equity 12=Other 14=Interest Rate 15=FX Cash 16=Energy 17=Metals	Int(2)	Indicates the product complex.

207	SecurityExchange	XCBT=Chicago Board of Trade XCME=Chicago Mercantile Exchange XNYM=New York Mercantile Exchange XCEC=COMEX (Commodities Exchange Center) XKBT=Kansas City Board of Trade XMGE=Minneapolis Grain Exchange DUMX=Dubai Mercantile Exchange XBMF=BM&FBOVESPA SA XMEX=Bolsa Mexicana de Valores XKLS=Bursa Malaysia XKFE=Korea Exchange XEMD=MexDer NYUM=XNYM-DUMX inter-exchange spread MGKB = XMGE-XKBT inter-exchange spread MGCB = XMGE-XCBT inter-exchange spread CMED = CME Europe Ltd	Exchange(4)	Exchange used to identify a security.
9853	PricingModel	F=Fisher-Black W=Whaley	String(1)	Identifies options pricing model.
9850	MinCabPrice		Price(20)	Defines cabinet price for outright options products.
454	NoSecurityAltID		NuminGroup(1)	This tag is under development.
→455	SecurityAltID		String(150)	This tag is under development.
→456	SecurityAltIDSource		String(1)	This tag is under development.

1147	UnitOfMeasureQty		Float(20)	This field contains the contract size for each instrument. Use in combination with tag 996-UnitofMeasure. Examples: Eurodollar futures -Tag 1147=1000000 -Tag 996=USD Live Cattle futures -Tag 1147=40000 -Tag 996=LBS Variable-Quantity Products For variable-quantity products, the contract size reflects the original contract size, before the application of the multiplier.
202	StrikePrice		Price(20)	Strike Price for an option.
947	StrikeCurrency		Currency(3)	Currency in which the StrikePrice is denominated.
562	MinTradeVol		Qty(9)	The minimum trading volume for a security.
1140	MaxTradeVol		Qty(9)	The maximum trading volume for a security.
15	Currency		Currency(3)	Identifies currency used for price. Absence of this field is interpreted as the default for the security. It is recommended that systems provide the currency value whenever possible.
120	SettlCurrency		Currency(3)	Identifies currency used for settlement price.
1141	NoMdFeedTypes		Int(1)	Number of repeating FeedType repeating group entries.
→1022	MDFeedType	GBX=CME Globex Book Depth GBI=CME Globex Implied Book Depth	String(3)	Describes a class of service for a given data feed.
→264	MarketDepth		Int(2)	Identifies the depth of book.

1142	MatchAlgorithm	F=First In, First Out (FIFO) K=Configurable C=Pro-Rata A=Allocation T=FIFO with LMM O=Threshold Pro-Rata S=FIFO with TOP and LMM Q=Threshold Pro-Rata with LMM Y=Eurodollar options	String(1)	Matching Algorithm - CME assigned values.
762	SecuritySubType	For options see: Summary - Options Spread Types for a complete list of values. For futures, see: Summary - Futures Spreads for a complete list of values.	String(5)	Indicates Strategy type. Covereds For a Covered options strategy, the covered strategy type will be preceded by 'CV:' followed by the Strategy Type code; for example, for a Covered vertical, this tag will contain 'CV:VT.' For a covered option outright, this tag will contain 'CV:FO.'
711	NoUnderlyings	Always '1'.	NumInGroup(1)	Number of underlying instruments. For options on futures, this repeating group will contain the underlying future. Note: 'Underlying instrument' refers to the security that must be delivered when a derivatives contract is exercised.
→311	UnderlyingSymbol	[N/A]	String(5)	Underlying security's Symbol. See tag 55-Symbol for description. When present, this is always equal to '[N/A]'.
→309	UnderlyingSecurityID		String(12)	Unique instrument ID as qualified by the exchange per tag 305-UnderlyingSecurityIDSource.
→305	UnderlyingSecurityIDSource	8	String(1)	This value is always '8' for CME.

1143	MaxPriceVariation		Price(20)	Differential value for price banding.
1144	ImpliedMarketIndicator	0=Non-Implied instrument 3=Implied instrument	Int(1)	Informs the market that an instrument is eligible for implied trading (Implied In & Out). If this tag is not present, instrument is non-implied.
870	NbInstAttrib		NumInGroup(5)	Number of repeating group InstrAttribType entries.
→871	InstAttribType	See Tag 871 and Tag 872 Table of Valid Values	Int(2)	Tag 871-InstAttribType and tag 872-InstAttribValue function together where tag 871 indicates the type of value that the following tag 872 will contain.
→872	InstAttribValue	See Tag 871 and Tag 872 Table of Valid Values	String(2)	Tag 871-InstAttribType and tag 872-InstAttribValue function together where tag 871 indicates the type of value that the following tag 872 will contain. Variable Tick Products When the preceding tag 871-InstAttribType='23', this tag will contain the VTT code. Fractional Display Price Products • When the preceding tag 871-InstAttribType='24', a value of '12' in this tag indicates product has fractional display price. • When the preceding tag 871-InstAttribType='25', this tag will contain the price denominator of main fraction. • When the preceding tag 871-InstAttribType='26', this tag will contain the price denominator of sub-fraction. Display Precision • When the preceding tag 871-InstAttribType='27', the tag will contain the number of decimals in the display price.

200	MaturityMonthYear		Month-year(8)	This field provides the actual calendar date for contract maturity - month and year (used for standardized futures and options). Format YYYYMM (i.e. 200912) • For futures spreads and options strategies, this field contains the first leg maturity. • For packs and bundles, this value represents the rollover date. • For daily products, this field contains the daily maturity (YYYYMMDD).
969	MinPriceIncrement		Float(20)	Minimum constant tick for the instrument, sent only if instrument is non-VTT (Variable Tick table) eligible.
1146	MinPriceIncrementAmount		Amt (20)	Under development.
779	LastUpdateTime		UTCTimeOnly(17)	Timestamp of when the instrument was deleted.
980	SecurityUpdateAction	D=Delete M=Modify	Char(1)	Included int he message on the Incremental feed when a mid-week deletion or modification (i.e. extension) occurs.
9787	DisplayFactor		Float(20)	Contains the multiplier to convert the CME Globex display price to the conventional price.
555	NoLegs		NumInGroup(3)	Number of legs (repeating groups).
→600	LegSymbol	[N/A]	String(6)	Only sent for options strategies and futures spreads. For an options leg, this value will be the same as that contained in tag 55-LegSymbol. For a futures leg, this tag will contain [N/A].
→623	LegRatioQty		Int(2)	The ratio of quantity for this individual leg relative to the entire multi-leg instrument.
→602	LegSecurityID		Int(64)	Unique instrument ID for the leg.
→620	LegSecurityDesc		String(20)	Leg security description (e.g., ESM0 C1130)

→603	LegSecurityIDSource	8=Exchange Symbol	String(1)	Identifies source of tag 602-LegSecurityID value. This value is always '8' for CME.
→624	LegSide	1=Buy 2=Sell	Char(1)	The side of the leg for this repeating group.
→5795	LegSecurityGroup		String(10)	The product code for the leg (e.g., ES).
→608	LegCFICode	CFICode Table of Values	String(6)	Multi-leg instrument's individual security's CFICode.
→764	LegSecuritySubType		String (5)	If leg repeating group is a spread, the strategy type for the spread.
→556	LegCurrency		Currency (3)	Currency associated with a particular leg's quantity.
→610	LegMaturityMonthYear		Month-year(6)	Leg instrument's individual security's MaturityMonthYear. See tag 200-MaturityMonthYear for description.
→612	LegStrikePrice		Price(2)	Leg instrument's individual security's StrikePrice. See tag 202-StrikePrice for description.
→616	LegSecurityExchange		String(4)	Exchange on which leg instrument is traded. See values above for tag 207-SecurityExchange. For Inter Exchange Spreads this tag will contain the exchange code of the given leg.
→942	LegStrikeCurrency		Currency(3)	Currency in which the strike price of an instrument leg of a multi-leg instrument is denominated.
→566	LegPrice		Price(20)	Price for a futures leg of a covered. See tag 44-Price for description.
→1017	LegOptiondelta		Float(12)	Delta used to calculate the quantity of futures used to cover the option or option strategy.
1180	ApplID		String(50)	The channel ID as defined in the XML Configuration file.

1300	MarketSegmentID		Int(2)	Identifies the market segment. Populated for all CME Globex instruments.
5796	TradingReferenceDate		LocalMktDate(8)	Indicates the date the last update to the settlement price, tag 1150-TradingReferencePrice, was updated in this message in YYYYMMDD format. Absence of this field indicates current day, expressed in local time at place to trade.
9779	UserDefinedInstrument	Y=User defined instrument N=Not a user defined instrument	String(1)	Identifies user-defined instruments. If the tag is not present, the instrument is not user-defined.
5770	PriceRatio		Float(15)	Used for price calculation in spread and leg pricing.
1435	ContractMultiplierUnit	1=multiplied by hour 2=multiplied by day	Int(1)	Indicates the type of multiplier being applied to the product. Optionally used in combination with tag 231-ContractMultiplier.
1439	FlowScheduleType	0=NERC Eastern Off-Peak 1=NERC Western Off-Peak 2=Calendar-All Days in month 3=NERC Eastern Peak 4=NERC Wester Peak	Int(1)	The schedule according to which the electricity is delivered in a physical contract, or priced in a financial contract. Specifies whether the contract is defined according to the Easter Peak, Eastern Off-Peak, Western Peak or Western Off-Peak.

231	ContractMultiplier		Int(5)	Number of deliverable units per instrument, e.g., peak days in maturity month or number of calendar days in maturity month. The FIX/FAST Security Definition (tag 35-MsgType=d) message for the variable quantity spread will be populated with the value '0' for tag 231-ContractMultiplier. The FIX/FAST Security Definition (tag 35-MsgType=d) message is populated with values for the outright legs for tag 231-ContractMultiplier and customers must extract this value.
996	UnitOfMeasure	See Tag 996-UnitOfMeasure Table of Valid Values	String(30)	Unit of measure for the products' original contract size. This will be populated for all products listed on CME Globex.
5818	DecayQty		Qty(8)	Indicates the quantity that a contract will decay daily by once the decay start date is reached.
5819	DecayStartDate		Date(8)	Indicates the date at which a decay contract will begin to decay.
5849	OriginalContractSize		Qty(12)	Fixed contract value assigned to a product.
5791	ClearedVolume		Qty(12)	Indicates the total cleared volume of instruments traded during the prior trading session.
5792	OpenInterestQty		Qty(12)	Indicates the total open interest for the market at the close of the prior trading session.
1234	NoLotTypeRules		NumInGroup(2)	Number of quantity types in the upcoming repeating group.

→1093	LotType	2=minimum order entry quantity for an instrument. 3=the minimum qty required for a block trade. 4=Round lot (Variable Quantity Products)	Char(1)	The quantity type used for the leg of the spread. This tag is required to interpret the value in tag 1231-MinLotSize.

- Market Data BVMF Tag 461-CFICode Table of Values
- Market Data - CFICode Table of Values
- Market Data Tag 762-SecuritySubType Table of Values
- Market Data Tag 871-InstAttribType and Tag 872-InstAttribValue Table of Values
- Market Data Tag 996-UnitOfMeasure Table of Values
- Market Data Security Definition Tag Usage per UDS Type

Market Data BVMF Tag 461-CFICode Table of Values

Future,Term	
FCSPSX	FFDCSX
FFICSX	FCAPSX
FFFCSX	FXXXXX
FFCCSX	MMXXXX

Option, Spot Option, Future Option	
OPEMCS	OCEACS
OCEMCS	OCEMCS
OPAMCS	OPASCS
OCAMCS	OPAICS
OPESCS	OPAFCS

OPEICS	OPACCS
OPEFCS	OPADCS
OPECCS	OPAACS
OPEDCS	OPAMCS
OPEACS	OCASCS
OPEMCS	OCAICS
OCESCS	OCAFCS
OCEICS	OCACCS
OCEFCS	OCADCS
OCECCS	OCAACS
OCEDCS	OCAMCS

Market Data - CFICode Table of Values

The following values are valid for order entry and market data tag 461-CFICode and tag 608-LegCFICode.

Futures Outright

The following table contains values for the six-character CFICode string for a future outright.

Byte	Valid Values	Description - Future Outright
1	F	F=Future
2	F, C, X	F=Financial Futures C=Commodity Futures X=Other

3	I, C, D, A, M, X	I=Indices C=Currencies D=Interest rate/notional debt. sec A=Agriculture M=Energy X=Unknown
4	X	X=Unknown
5	S	S=Standardized terms
6	X	X=Not applicable

Futures Spread

Byte	Valid Values	Description - Future Spread
1	F	F=Future
2	M	M=Miscellaneous
3	I, C, D, A, M, X	I=Indices C=Currencies D=Interest rate/notional debt A=Agriculture M=Energy X=Unknown
4	X	X=Unknown
5	S	S=Standardized terms
6	X	X=Not applicable

Options Outright

The following table contains values for the six-character CFICode string for an option outright.

Byte	Valid Values	Description - Option Outright
1	O	O=Option
2	C, P, X	C=Call P=Put X=Unknown
3	A, E, X	A=American E=European X=Unknown
4	F, X	F=Futures X=Unknown
5	P	P=Physical
6	S	S=Standardized

Options Spread

The following table contains values for the six-character CFICode string for an option strategy.

Byte	Valid Values	Description - Option Strategy
1	O	O=Option
2	M	M=Other
3	X	X=Unknown
4	F, X	F=Futures X=Unknown
5	P	P=Physical
6	S	S=Standardized

Invoice Swaps

The following table contains values for the six-character CFICode string for an Invoice Swap.

Byte	Valid Values	Description
1	M	M=Other
2	R	R=Referential Instrument
3	R	R=Interest Rates
4	X	X=Undefined
5	X	X=Undefined
6	X	X=Undefined

Market Data Tag 762-SecuritySubType Table of Values

Options	Futures
3W - 3 way	SP - Calendar spread
3C - 3 way straddle vs call	FX - FX Calendar spread
3P - 3 way straddle vs put	RT - Reduced Tick calendar spread
BX - Box	EQ - Equity calendar spread
BO - Butterfly (options)	BF - Butterfly (futures)
XT - Xmas Tree	CF - Condor
CC - Conditional Curve	FS - Strip
CO - Condor	IS - Intercommodity spread

DB - Double	PK - Pack
HO - Horizontal	MP - Month pack
HS - Horizontal straddle	PB - Pack butterfly
IC - Iron Condor	DF - Double butterfly
12 - Ratio 1X2	PS - Pack spread
13 - Ratio 1x3	C1 - Crack 1:1
23 - Ratio 2x3	FB - Bundle
RR - Risk Reversal	BS - Bundle spread
SS - Straddle strip	IV - Implied Treasury Intercommodity spread
ST - Straddle	EC - TAS calendar spread
SG - Strangle	SI - Commodities Intercommodity spread
SR -Sstrip	MS - BMD futures strip
VT - Vertical	SA - Energy Strip
JR - Jelly roll	SB - Balanced Strip
IB - Iron butterfly	WS - Unbalanced Strip spread
GT - Guts	XS - Energy Inter-Commodity Strip
GN - Generic	DI - Interest Rate Inter-Commodity Spread
SA - Energy strip	SD - Reduced Tick FX calendar spread
DG - Calendar diagonal	IN - Invoice Swap
FO - Covered option outright	TL - Treasury Tail Spread

Market Data Tag 871-InstAttribType and Tag 872-InstAttribValue Table of Values

Tag	Code Value	Description
871	23	See Variable Tick Table for Tag 872 Value
871	24	Eligibility
872	1	Electronic Match Eligible
872	2	Order Cross Eligible
872	3	Block Trade
872	4	EFP Eligible
872	5	EBF Eligible
872	6	EFS Eligible
872	7	EFR Eligible
872	8	OTC Eligible
872	9	iLink Mass Quoting Eligible
872	10	Negative Strike Eligible
872	11	Negative Price Eligible
872	12	Is Fractional
872	13	Reserved for Future Use
872	14	RFQ Cross Eligible
872	16	Zero Price Eligible
872	17	Decaying Product Eligibility
872	18	Variable Product Eligibility
872	19	Daily Product Eligibility
871	25	Main Fraction

872		Price Denominator of Main Fraction
871	26	Sub Fraction
872		Price Denominator of SubFraction
871	27	Display Price Precision
872		Number of Decimals in Displayed Price

Market Data Tag 996-UnitOfMeasure Table of Values

Tag 996-UnitOfMeasure	Description
AUD	Australian Dollar
BBL	Blue Barrel (42-gallon oil barrel)
BDFT	Board Feet
BRL	Brazilian Real
BU	Bushel
CAD	Canadian Dollar
CHF	Swiss Franc
CHIP	Carville Hurricane Index Percentage
CTRCT	Contract
CWT	Hundred Weight
CZK	Czech Koruna
DEM	Deutsche Mark
EUR	Euro
GAL	Gallons

GBP	Pounds Sterling (British Pounds)
GRAMS	Grams
HUF	Hungarian Florint
ILS	Israeli Shekel
INR	Indian Rupee
IPNT	Index Points
JPY	Japanese Yen
KRW	Korean Won
LBS	Pounds
MTONS	Metric Tons
MMBTU	One Million British Thermal Units
MP	Mexican Peso
MWH	Megawatts Per Hour
MXN	Mexican Peso
MYR	Malaysian Ringgit
NOK	Norwegian Kroner
NZD	New Zealand Dollar
PLN	Polish Zloty
RMB	Chinese Renminbi
RUR	Russian Ruble
SEK	Swedish Kronor

TON	Ton
TRY	Turkish Lira
TRYOZ	Troy Ounce
USD	U.S. Dollar
ZAR	South African Rand

Market Data Security Definition Tag Usage per UDS Type

The following table summarizes the market data Security Definition messaging differences across UDS types

Tag	Tag Name	Description	Exchange-Defined Futures Spreads	UDS Options Combos	UDS Options Covereds	UDS Futures
202	StrikePrice	Strike price for an option	Never sent	Always sent	Always sent	Never sent
462	UnderlyingProduct	Indicates the Product Complex	Always sent	Never sent	Never sent	Never sent
→620	LegSecurityDesc	Leg security description (e.g., ESM0 C1130)	Never sent	Always sent	Always sent	Always sent
→5795	LegSecurityGroup	The product code for the leg (e.g., ES)	Never sent	Always sent	Always sent	Never sent
→556	LegCurrency	Currency associated with a particular leg's quantity	Never sent	Always sent	Always sent	Never sent
→608	LegCFICode	CFICode Table of Values Multi-leg instrument's individual security's CFICode.	Never sent	Always sent	Always sent	Never sent
→610	LegMaturityMonthYear	Leg instrument's individual security's MaturityMonthYear. See tag 200-MaturityMonthYear for description.	Never sent	Always sent	Always sent	Never sent

→612	LegStrikePrice	Leg instrument's individual security's StrikePrice. See tag 202-StrikePrice for description.	Never sent	Always sent	Always sent	Never sent
→616	LegSecurityExchange	Exchange on which leg instrument is traded. See values above for tag 207-SecurityExchange. For Inter Exchange Spreads this tag will contain the exchange code of the given leg.	Sent for Inter-Exchange Spreads only	N/A	N/A	N/A
→1017	LegOptionDelta	Delta used to calculate the quantity of futures used to cover the option or option strategy.	Never sent	Sent as "0"	Always sent	Never sent
→566	LegPrice	Price for a futures leg of a covered. See tag 44-Price for description.	Never sent	Never sent	Always sent	Never sent
→764	LegSecuritySubType	If leg repeating group is a spread, the strategy type for the spread.	Never sent	Never sent	Always sent	Never sent
1143	MaxPriceVariation	Differential value for price banding	Always sent	Never sent	Never sent	Sent if price band has been assigned
1144	ImpliedMarketIndicator	Informs the market that an instrument is eligible for implied trading (Implied In & Out). If this tag is not present, instrument is non-implied and leg messages are not sent.	Sent if spread is implied	Never sent	Never sent	Sent if spread is implied UDS for futures will not be implied for this launch
1148	LowLimitPrice	Low price threshold for the instrument. Orders submitted with prices below the low limit will be rejected.	Sent if a low limit price has been assigned	Never sent	Never sent	Sent if a low limit price has been assigned

1149	HighLimitPrice	High price threshold for the instrument. Orders submitted with prices above the high limit will be rejected	Sent if a high limit price has been assigned	Never sent	Never sent	Sent if a high limit price has been assigned
1150	TradingReferencePrice	The most recent settlement price Tag 5796-TradingReferenceDate provides the date of the price Tag 731-SettPriceType provides the type of settlement the price represents	Always sent	Never sent	Never sent	Sent if spread has a settlement price
731	SettlPriceType	Indicates whether settlement price is preliminary or final.	Always sent	Never sent	Never sent	Sent if spread has a settlement price
5796	TradingReferenceDate	Indicates the date the last update to the settlement price, tag 1150-TradingReferencePrice, was updated in this message in YYYYMMDD format. Absence of this field indicates current day, expressed in local time at place to trade.	Always sent	Never sent	Never sent	Sent if spread has a settlement price
9779	UserDefinedInstrument	Identifies user-defined instruments. If the tag is not present, the instrument is not user-defined.	Never sent	Always sent	Always sent	Always sent
1234	NoLotTypeRules	Number of quantity types in the upcoming repeating group.	Sent if applicable to spread	Always sent	Always sent	Always sent
→1093	LotType	The quantity type used for the leg of the spread. This tag is required to interpret the value in tag 1231-MinLotSize.	Sent if applicable to spread	Always sent	Always sent	Always sent

→1231	MinLotSize	Minimum quantity accepted for order entry. If tag 1093-LotType=4, this value is the minimum quantity for order entry expressed in the applicable units, specified in tag 996-UnitOfMeasure, (e.g., megawatts).	Sent if applicable to spread	Always sent	Always sent	Always sent

Market Data - Security Status

The Security Status (tag 35-MsgType=f) message is sent to indicate a change in the market state for an instrument or instrument group.

Tag	FIX Name	Valid Values	Format	Description
48	SecurityID		Int (12)	If this tag is present, this Security Status (tag 35-MsgType=f) message is sent for this instrument.
22	SecurityIDSource	8=Exchange symbol	String (1)	Identifies source of tag 48-SecurityID value. This value is always 8 for CME and is required if tag 48-SecurityID is specified.
75	TradeDate		LocalMktDate (8)	Indicates the date of trade sssion in YYYYMMDD format.
332	HighPx		Price (20)	Upper price threshold for the instrument. Orders submitted with prices above the upper limit will be rejected. Note: Absence of this tag indicates that the limit has been removed
333	LowPx		Price (20)	Lower price threshold for the instrument. Orders submitted with prices below the lower limit will be rejected. Note: Absence of this tag indicates that the limit has been removed
55	Symbol		String (6)	If this tag is present, this Security Status (tag 35-MsgType=f) message is sent for this instrument group.

326	SecurityTradingStatus	2=Trading halt 17=Ready to trade (start of session) 18=Not available for trading (end of session) 20=Unknown or invalid 21=Pre-open 24=Pre-cross 25=Cross 26=No cancel	Int (2)	Identifies the trading status applicable to the instrument or instrument group.
327	HaltReason	1=Suspended by surveillance 2=Trading 4=Return to normal state	Int (2)	Indicates halt reason status due to surveillance activity.
1174	SecurityTradingEvent	1=Trading Halt/Stop Spike/Velocity Logic 2=Resume/Open 4=End of Trading Session	Int (3)	Indicates the trading status applicable to the transaction.

Market State and Instrument State Order Activity Restrictions

The CME Globex Trading Day proceeds through distinct periods, known as market states, during which defined types of activity are allowed to take place to ensure market integrity. Market states are disseminated over market data and managed by the GCC.

> ⓘ The Market State is applicable to all related instruments. Individual instruments are further subject to Instrument States.

Market State	Security Status Message Values	Description
Pre-Open	Price Indication	Start of Communication Inquiries. No cancels, modifies, or order entry allowed.

	Pre-Open tag 326-SecurityTradingStatus=21	Earliest phase of Opening market state. Order Entry, modification, and cancel are allowed. The following order types, qualifiers, and behaviors are not allowed and will be rejected: • Market with Protection • Market-Limit • Fill and Kill (FAK) • Fill or Kill (FOK) i.e. orders and modifies submitted with a minimum quantity No order matching.
Pre-Open/No Cancel	No Cancel tag 326-SecurityTradingStatus=26	End of pre-open stage. Order entry is allowed. The following order types, qualifiers, and behaviors are not allowed and will be rejected: • Market with Protection • Market-Limit • Fill and Kill (FAK) • Fill or Kill (FOK) i.e. orders and modifies submitted with a minimum quantity Modification and cancellation are not allowed. No order matching.
Open	Ready to trade/Start of Session tag 326-SecurityTradingStatus=17	Start of continuous trading phase period where pre-open orders are resolved following Indicative Opening Price (IOP) determination. Order matching begins. Mass Quotes are accepted only in this state.

Pause	Activity is paused tag 326-SecurityTradingStatus=2	Start of interruption of continuous trading for one or more instruments. The following order types, qualifiers, and behaviors are not allowed and will be rejected: • Market with Protection • Market-Limit • Stop with Protection • Fill and Kill (FAK) • Fill or Kill (FOK) i.e. orders and modifies submitted with a minimum quantity
	Trading Halt tag 326-SecurityTradingStatus=2	Interruption of continuous trading and the period during which only order cancellation is allowed. No orders are matched.
Closed	Not available for trading/End of session tag 326-SecurityTradingStatus=18	End of communication. Order entry, modification, and cancellation are not allowed. Day orders, expiring GTD orders, and mass quotes are eliminated.
Post Close/Pre-Open	Not available for trading tag 326-SecurityTradingStatus=21	End of day preparation for the next pre-open. This market state allows order placement, modification, and cancellation of GTC/GTD orders only. No matching takes place and no action can be taken on non-GTC/GTD orders.

Instrument States

Instrument states can be applied to individual instruments. An Instrument State cannot be less restrictive than the Market State; for example, an Instrument State cannot be Open if the Market State is Closed. Unless otherwise indicated in the market data, the Instrument State is identical that of the Market State.

Instrument State	Security Status Message Values	Description

Open	tag 326-SecurityTradingStatus=17(open) tag 327-Halt Reason=4 (return to normal) tag 1174-SecurityTrading Event=2 (resume/open)	New orders submission, order modification, order cancellation, Mass Quote submission, and Request for Quotes are allowed.
Reserve	tag 326-SecurityTradingStatus=21(pre-open) tag 327-Halt Reason=1 (suspended by surveillance) tag 1174-SecurityTradingEvent=1 (trading halt/stop spike)	Instruments can be put into a Reserve state while the Market State is Open. During Reserve, orders may be entered, modified, or canceled. No order matching occurs in Reserve.
Pause	tag 326-SecurityTradingStatus=2 (trading halt) tag 327-Halt Reason=1 (suspended by surveillance)	Only Order Cancel Requests are accepted.
Close	tag 326-SecurityTradingStatus=2 (trading halt)	Order entry, modification, and cancellation are not allowed. Day orders, expiring GTD orders, and mass quotes are eliminated.
Pre-Cross	tag 326-SecurityTradingStatus=24 (Pre-Cross) tag 327-Halt Reason=2 (Trading) tag 1174-SecurityTradingEvent=2 (resume/Open)	Instrument is entering Cross state.
Cross	tag 326-SecurityTradingStatus=25 (Cross) tag 327-Halt Reason=2 (Trading) tag 1174-SecurityTradingEvent=2 (resume/Open)	Cross trade is occurring for the instrument.

Market Data - Quote Request

The Market Data - Quote Request (tag 35-MsgType=R) message is generated when a market participant submits a Request for Quote and is also also sent at the creation of a User Defined Strategy (UDS) to initiate quoting and order activity on an instrument.

The → symbol indicates a repeating group tag.

Tag	FIX Name	Valid Values	Format	Description
131	QuoteReqID		String (23)	Quote request ID defined by the exchange. This is the same value found in tag 9770-ExchangeQuoteReqID in the Quote Acknowledgment message.
146	NoRelatedSym	1	NuminGroup (5)	Indicates the number of repeating symbols specified.
→55	Symbol		String (6)	Ticker symbol.
→38	OrderQty		Qty (9)	Quantity requested.
→54	Side	1=Buy 2=Sell 8=Cross	Char (1)	For a Quote Request, indicates the side requested. 8=intent to submit a Cross order.
→60	TransactTime		UTCTimestamp (21)	Time of quote request creation, expressed in UTC (Coordinated Universal Time, also know as 'GMT').
→537	QuoteType	1=Tradable	Int (1)	Type of quote requested. A tradable quote can trade against other orders and quotes upon acceptance.
→48	SecurityID		Int (12)	Unique instrument ID as qualified by the exchange per tag 22-SecurityIDSource.
→22	SecurityIDSource	8=Exchange symbol	String (1)	Identifies source of tag 48-SecurityID value. this value is always '8' for CME and is required if tag 48-SecurityID is specified.

Market Data - Replay Request

The Market Data - Replay Request (tag 35-MsgType=V) message is used to request a TCP Replay for message recovery.

Tag	FIX Name	Valid Values	Format	Description
1180	ApplID		String (50)	The channel ID from the XML Configuation file for which this request is made.
262	MDReqID		String (32)	Unique identifier for Market Data Request.
1182	ApplBeginSeqNo		SeqNum (9)	Message sequence number of the first message in range to be re-sent. If the request is for a single message, tag 1182-ApplBeginSeqNo and tag 1183-ApplEndSeqNo are the same.
1183	ApplEndSeqNo		SeqNum (9)	Message sequence number of last message in range to be re-sent. If the request is for a single message, tag 7-BeginSeqNo and tag 16-EndSeqNo are the same. The maximum number of messages that can be requested is 2000.

Market Data - Snapshot Full Refresh

The Market Data - Snapshot Full Refresh (tag 35-MsgType=W) message provides a snapshot for all books with any activity since the beginning of the week over the Incremental Feed.

Tag	FIX Name	Valid Values	Format	Description
22	SecurityIDSource	8=Exchange symbol	String (1)	Identifies source of tag 48-SecurityID value. This value is always '8' for CME and is required if tag 48-SecurityID is specified.
48	SecurityID		Int (12)	Unique instrument ID as qualified by the exchange in tag 22-SecurityIDSource.
1682	MDSecurityTradingStatus	2=Trading halt 17=Ready to trade (start of session) 18=Not available for trading (end of session) 20=Unknown or invalid 21=Pre-open 24=Pre-cross 25=Cross 26=No cancel	Int (2)	Identifies the state of the instrument.
83	RptSeq		Int (3)	Sequence number per instrument update, which contains the same data as the corresponding tag 83-RptSeq in the Market Data Incremental Refresh (tag 35-MsgType=X) message.
268	NoMDEntries		NumInGroup (5)	Number of FIX Market Data Snapshot Full Refresh Data Blocks in the Market Data Snapshot Full Refresh message.
911	TotNumReports		Int (9)	Total number or reports returned in response to a request.
1021	MDBookType	2=Price Depth	Int (1)	Describes the type of book for which the feed is intended.

Market Data Snapshot Full Refresh Repeating Group - Data Block

The → symbol indicates a repeating group tag.

Tag	FIX Name	Valid Values	Format	Description
→269	MDEntryType	0=Bid 1=Offer 2=Trade 4=Opening Price 7=Trading Session High Price 8=Trading Session Low Price N=Session High Bid O=Session Low Offer W=Fixing Price	Char (1)	Type of Market Data entry.
→270	MDEntryPx		Price (20)	Price of the Market Data entry.
→271	MDEntrySize		Qty (9)	Quantity or volume represented by the Market Data entry.
→276	QuoteCondition	K=Implied	MultipleValueString 2(1)	
→1023	MDPriceLevel	From '1' to '10'.	Int (2)	Depth position int he book. Any number from '1' to '10' is acceptable.
→346	NumberOfOrders		Int (9)	Number of orders in the market.
→1020	TradeVolume		Qty (9)	Total traded volume since the beginning of the session. If this tag is not present, then there is no volumen.
→274	TickDirection	0=Plus Tick 2=Minus Tick	Char (1)	Direction of the tick. If there is no value present, then there is no change.
→451	NetChgPrevDay		PriceOffset (20)	Net change from previous day's closing price vs. last traded price.

Market Data - Incremental Refresh

The Market Data Incremental Refresh (tag 35-MsgType=X) message is used to transmit book updates such as bid, ask, trade, and statistical data such as high bid, low offer, settlement price, etc.

See Common Data Blocks for a list of tags used for Incremental Refresh book updates and statistics.

The → symbol indicates a repeating group tag.

Tag	FIX Name	Valid Values	Format	Description
75	TradeDate		LocalMktDate (8)	Indicates date of trade reference in this message in YYYYMMDD format. Absence of this field indicates current day (expressed in local time at place of trade).
268	NoMDEntries		NumInGroup (5)	Number of Market Data Incremental Refresh Data Blocks in the Market Data Increment Refresh message.
Market Data Incremental Refresh Repeating Group (Data Block)				
→279	MDUpdateAction	0=New 1=Change 2=Delete 5=Overlay	Char (1)	Type of Market Data update action.
→1023	MDPriceLevel	From '1' to '10'.	Int (2)	Depth position in the book.

→269	MDEntryType	0=Bid 1=Offer 2=Trade 4=Opening price 6=Settlement price 7=Trading session high price 8=Trading session low price B=Trade volume C=Open Interest E=Simulated Sell F=Simulated Buy J=Empty the book N=Session high bid O=Session low offer W=Fixing price X=Cash note	Char (1)	Type of Market Data entry.
→22	SecurityIDSource	8=Exchange symbol	String (1)	Identifies source of tag 48-SecurityID value. This value is always '8' and is required if tag 48-SecurityID is specified.
→48	SecurityID		Int (12)	Unique instrument ID as qualified by the exchange in tag 22-SecurityIDSource.
→83	RptSeq		Int (1)	Sequence number per instrument update.
→276	QuoteCondition	K=Implied C=Exchange Best	MultipleValueString2 (1)	Space-delimited list of conditions describing a quote.
→270	MDEntryPx		Price (20)	Price of the Market Data entry.
→346	NumberOfOrders		Int (7)	Number of orders in the market.
→273	MDEntryTime		UTCTimeOnly (12)	Time of Market Data entry.

→271	MDEntrySize		Qty (12)	Quantity or volume represented by the Market Data entry.
→336	TradingSessionID	0=Pre-opening 1=Opening Mode 2=Continuous Trading Mode	String (1)	Market state identifier for trading session.
→451	NetChgPrevDay		PriceOffset (20)	Net change from previous day's settlement price vs. last traded price.
→274	Tick Direction	0=Plus Tick 2=Minus Tick	Char (1)	Direction of the tick. If there is no value present, then there is no change.
→286	OpenCloseSettleFlag	5=Theoretical Price Value 100=Actual Preliminary for instruments not subject to settlement price rounding; Rounded Preliminary for instruments subject to settlement price rounding (e-mini, e-micro, and miNY products) 101=Actual Preliminary for instruments subject to settlement price rounding (e-mini, e-micro, and miNY products)	Int (3)	Indicates whether opening price or settle is from previous day or if it is a preliminary price.
→64	SettlDate		LocalMktDate (8)	Indicates date of settlement referenced in this message in YYYYMMDD format.

→277	TradeCondition	E=Opening Trade 1=CME Globex calculated price	MultipleValueString2(1)	Sent for: • Opening trade • Leg trade at a CME Globex calculated price which is the result of a spread trading against another spread.
→1020	TradeVolume		Qty (12)	Total traded volume, including legs of spreads, since the beginning of the session.
→1070	MDQuoteType	1=Tradable	Int (1)	Identifies the type of quote.
→5790	FixingBracket		Char (5)	time that the Fixing Price was calculated.
→5797	AggressorSide	1=Buy 2=Sell	Char (1)	Indicates which side is aggressor of the trade. If this tag is not sent, then there is no aggressor in the trade. An implied order cannot be the aggressor in a trade. Tag 5797-AggressorSide is not sent in an implied spread or outright trade message.
→5799	MatchEventIndicator	0=Mid-event 1=Beginning of CME Globex event 2=End of CME Globex event 3=Beginning and end of CME Globex event	Char (1)	Under development.

→1003	TradeID		Int (10)	Unique Trade Entry ID per Instrument and Trading Date. Matches the trade number from tag 17-ExecID in the Execution Report - Fill Notice for iLink Order Entry Messages.

Common Data Blocks for the Market Data Incremental Refresh Message

Book Update Data Block - 5-Deep Book

A FIX message sent to update the top of book will update one side only. The tags normally sent for a book update data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 1023-MDPriceLevel
- tag 273-MDEntryTime
- tag 271-MDEntrySize
- tag 270-MDEntryPx
- tag 346-NumberOfOrders
- tag 48-SecurityID
- tag 22-SecurityIDSource
- tag 336-TradingSessionID

Book Update Data Block - 2-Deep Book

A FIX message sent to update the top of book will update one side only. The tags normally sent for a book update data block are:

> Tag 346-NumberOfOrders is not included in this data block.

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 276-QuoteCondition
- tag 1023-MDPriceLevel
- tag 273-MDEntryTime
- tag 271-MDEntrySize
- tag 270-MDEntryPx

- tag 48-SecurityID
- tag 22-SecurityIDSource
- tag 336-TradingSessionID

Book Update Data Block - 1-Deep Book

A FIX message sent to update a 1-deep book updates one side only. The tags normally sent for a 1-deep book data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 1023-MDPriceLevel
- tag 273-MDEntryTime
- tag 271-MDEntrySize
- tag 270-MDEntryPx
- tag 346-NumberOfOrders
- tag48-SecurityID
- tag22-SecurityIDSource
- tag 336-TradingSessionID

Last Best Price

The tags normally sent for a last best price data block are:

> Tag 277-TradeCondition is not sent for a last best price data block.

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource
- tag 276-QuoteCondition

Session High and Low Trade Price

The tags normally sent for a session high and low trade price data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime

- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource

Best High Bid and Best Low Ask

The tags normally sent for a best high bid and best low ask data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource

Closing Price

The tags normally sent for closing data blocks are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource

Pre-Opening Statistics - Prior

The tags normally sent for a prior data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource
- tag 336-TradingSessionID
- tag 274-TickDirection
- tag 451-NetChgPrevDay

Pre-Opening Statistics - Opening

The tags normally sent for an opening data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource

Pre-Opening Statistics - Simulated Sell

The tags normally sent for a simulated sell data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 271-MDEntrySize
- tag 48-SecurityID
- tag 22-SecurityIDSource

Pre-Opening Statistics - Simulated Buy

The tags normally sent for a simulated buy data block are:

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq
- tag 273-MDEntryTime
- tag 270-MDEntryPx
- tag 271-MDEntrySize
- tag 48-SecurityID
- tag 22-SecurityIDSource

Trade

> Tag 277--TradeCondition is not sent for a last best price data block.

- tag 279-MDUpdateAction
- tag 269-MDEntryType
- tag 83-RptSeq

- tag 273-MDEntryTime
- tag 271-MDEntrySize
- tag 270-MDEntryPx
- tag 48-SecurityID
- tag 22-SecurityIDSource
- tag 1020-TradeVolume
- tag 274-TickDirection
- tag 451-NetChgPrevDay
- tag 277-TradeCondition

Settlement Prices

Preliminary Settlement Price – Rounded or Actual

The tags normally sent for preliminary (rounded or actual) settlement price data blocks are:

- tag 75-TradeDate
- tag 64-SettleDate
- tag 286-OpenCloseSettlFlag
- tag 269- MDEntryType

Final Theoretical Settlement Price

The tags normally sent for final settlement price data blocks are:

- tag 75-TradeDate
- tag 64-SettleDate
- tag 286-OpenCloseSettlFlag
- tag 269-MDEntryType

Final Settlement Price

The tags normally sent for final settlement price data blocks are:

> The final settlement will not contain tag 286-OpenCloseSettleFlag.

- tag 75-TradeDate
- tag 64-SettleDate
- tag 269-MDEntryType