CME Datamine: Query API Fields

Specifications document - version 1.0

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Contents

1. About This Guide

This document explains the fields used in TickSmith's query API's to return a file containing the queried data within the specified datasets: EOD, Block, Tick, and BBO. Ticksmith will define and populate a parquet table for this purpose. This guide lists all queriable fields along with the man

1.1 Revision history

Document	Description	Date
Version 0.1	Created document	29/06/2017
Version 1.0		
Version 1.1		
Version 1.2		

2. The Query Fields

To return appropriate data, the query API searches through relevant fields within multiple files given an available dataset as a parameter. The dataset this API accepts is: “eod” as well as a “Date From” and “Date To” parameter. The in-file fields the query api can search through are listed below:

2.1 EOD Data

Field	Type	Description	Required
tradeDate	YYYYMMDD	The trade date in YYYYMMDD format. The mandatory parameters “Date From” and “Date To” will search for and return all rows with a tradeDate value within the queried parameters	Mandatory [Between “Date From” and “Date To”] The maximum query range is 12 months
exchangeCode	string	The exchange where the product is traded. Possible values are: XCME, XCBT, XNYM, XCEC, MGCB	Mandatory
period	char	Identifies the period of the files. Can be “e,p,f” representing early, preliminary, and final	Mandatory
productCode[1]	string	**Important note:** the ‘productCode’ is the field name queried on the db to match the symbol; on the user’s side the productCode means something entirely different. The user should instead pass the ‘symbol’ into the query api. The symbol of a particular product. The mandatory entry will be the first string in a comma-separated list. Optional entries are listed after the first comma up to 9 entries	1 mandatory entry plus up to 9 additional comma-separated optional entries
productType	string	Designates whether the contract is a Future (F) or Option (O). Have also found column values “FUT” and “OPT” for ‘period=e’ files.	Optional

[1] The end-user should pass the 'symbol' field from Datamine into the query api not the productCode. The productCode is the field name.

putCall	char	If an option, designates whether the contract is a Put (P) or Call (C), otherwise the value shows a NULL.	Optional
strikePrice	int	If an option, the strike price is shown. (Can be 0 or NULL if not applicable).	Optional
contractYear	int (YYYY)	The year the contract expires.	Optional
contractMonth	int (MM)	The delivery month for the future or option contract.	Optional
contractDay	int (DD)	Indicates the expiration day of the option contract (Can be 0 or NULL if not applicable). Only used for daily options.	Optional

2.2 Block Trades Data

Field	Type	Description	Required
tradeTime	HH:MM:SS	Time the transaction was executed.	Mandatory
tradePrice	Number	The agreed upon price.	Mandatory
tradeDate	YYYYMMDD	Date the transaction was reported.	Mandatory
reportedTime	HH:MM	Time the transaction was reported.	Optional
productType	Future, Option	The type of product.	Optional
exchangeCode	XNYM= New York Mercantile Exchange XCEC= Commodities Exchange Center XCME= Chicago Mercantile Exchange XCBT= Chicago Board Of Trade	The exchange that lists the product.	Optional
contractYear	Number	Expiration year.	Optional
contractSymbol	String	Trading symbol.	Optional
contractMonth	Number	Expiration month.	Optional
assetClass	String	Highest level of grouping.	Optional

2.3 Top-of-Book (BBO) Data

Data Field	Type	Description	Required
tradeDate	YYYYMMDD	Day the trade or quote was entered	Mandatory
tradeTime	HHMMSS	Time the trade or quote was entered in the system	Mandatory
tickerSymbol	string	The product code	Mandatory
foiIndicator	Futures (F) / Options (O)	Indicates the type of market data	Optional
deliveryDate	YYMM	Indicates the month the contract expires	Optional
strikePrice	int	The strike or exercise price of the option, if applicable	Optional
tradePrice	int	Actual price traded	Optional
askBidType	Bids (B) / Offers (A)	Indicates Type	Optional
entryDate	YYMMDD	Entry date of trade	Optional

2.4 Time & Sales (Tick) Data

Data Field	Format	Heading on Extract File	Mandatory
tradeaDate	YYYYMMDD	T.Date	Mandatory
tradeTime	HHMMSS	T.Time	Mandatory
tickerSymbol	Alphanumeric	Symbol	Mandatory
sessionIndicator	E,R	Session Ind	Optional
futureOptionIndexIndicator	F,P,C,I	C/P/F	Optional
contractDeliveryDate	YYMM	Contract Delivery	Optional
strikePrice	Numeric	Strike Price	Optional
tradePrice	Numeric	T.Price	Optional
askBidType	Alphanumeric	A/B	Optional
entryDate	YYYYMMDD	Entry Date	Optional
exchangeCode	Alphanumeric	exch_code	Optional

3.How to use the APIs

Below is the format of an api call:

```
curl --user {{UNO_API_KEY}}:{{UNO_API_PASSWORD}}
'https://{{URL}}/cme/api/v1/query/{{dataset}}/{{exchangeCode}}/{{tradeDateFrom}}/{{tradeDateTo}}/
{{period}}/{{productCode}},[[optionalProductCodes]]?[[criteria1]]=[[val1]]&[[criteria2]]=[[val2]]&[[crit
eriaN]]=[[valN]]’
```

Below is an example api call URL:

```
curl --user API_JOHNSMITH:12345
'https://datamine.cmegroup.com/cme/api/v1/query/eod/xcme/20160221/20160326/f/za,zc,yt?prod
```

uctType=o&contractYear=2016'

Curl return:

```
Jimmys-Mac-mini:jhuang$ curl --user API_Jimmyhuang:Allo1234 'https://datamineuat.cmegroup.com/cme/api/v1/dataset/query/eod/xcme/20160221/20160326/f/za,zc,yt?productType=o&contractYear=2016'
TradeDate;ExchangeCode;AssetClass;ProductCode;ClearingCode;ProductDescription;ProductType;UnderlyingProductCode;PutCall;StrikePrice;ContractYear;ContractMonth;ContractDay;Settlement;Settleme
or;OpenInterest;TotalVolume;GlobexVolume;FloorVolume;PNTVolume;BlockVolume;EFPVolume;EOOVolume;EFRVolume;EFSVolume;EFBVolume;EFMVolume;SUBVolume;OPNTVolume;TASVolume;TASBlockVolume;TAMSingap
gaporeBlockVolume;TAMLondonVolume;TAMLondonBlockVolume;GlobexOpenPrice;GlobexOpenPriceBidAskIndicator;GlobexOpenPriceCabinetIndicator;GlobexHighPrice;GlobexHighPriceBidAskIndicator;GlobexHig
icator;GlobexLowPrice;GlobexLowPriceBidAskIndicator;GlobexLowPriceCabinetIndicator;GlobexClosePrice;GlobexClosePriceBidAskIndicator;GlobexClosePriceCabinetIndicator;FloorOpenPrice;FloorOpenP
tor;FloorOpenPriceCabinetIndicator;FloorOpenSecondPrice;FloorOpenSecondPriceBidAskIndicator;FloorHighPrice;FloorHighPriceBidAskIndicator;FloorHighPriceCabinetIndicator;FloorLowPrice;FloorLow
ator;FloorLowPriceCabinetIndicator;FloorClosePrice;FloorClosePriceBidAskIndicator;FloorClosePriceCabinetIndicator;FloorCloseSecondPrice;FloorCloseSecondPriceBidAskIndicator;FloorPostClosePri
ePriceBidAskIndicator;FloorPostCloseSecondPrice;FloorPostCloseSecondPriceBidAskIndicator;Delta;ImpliedVolatility;LastTradeDate
"20160222";"XCME";"FX";"YT";"YT";"EURO FX OPTIONS (EUROPEAN)";"O";"EC";"C";"1070.0000000";"2016";"3";"0";"0.0338000";"";"1";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0
"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"0.0445000";"N";"";"";"";"";"";"";"";"0.9392400";"0.1140639";"20160304"
"20160222";"XCME";"FX";"YT";"YT";"EURO FX OPTIONS (EUROPEAN)";"O";"EC";"C";"1075.0000000";"2016";"3";"0";"0.0291000";"";"20";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"
;"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"0.0396000";"N";"";"";"";"";"";"";"";"0.9133300";"0.1099399";"20160304"
"20160222";"XCME";"FX";"YT";"YT";"EURO FX OPTIONS (EUROPEAN)";"O";"EC";"C";"1080.0000000";"2016";"3";"0";"0.0246000";"";"12";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"
;"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"0.0348000";"N";"";"";"";"";"";"";"";"0.8736300";"0.1074675";"20160304"
"20160222";"XCME";"FX";"YT";"YT";"EURO FX OPTIONS (EUROPEAN)";"O";"EC";"C";"1085.0000000";"2016";"3";"0";"0.0203000";"";"47";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"0";"
;"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"";"0.0302000";"N";"";"";"";"";"";"";"";"0.8209100";"0.1047546";"20160304"
```

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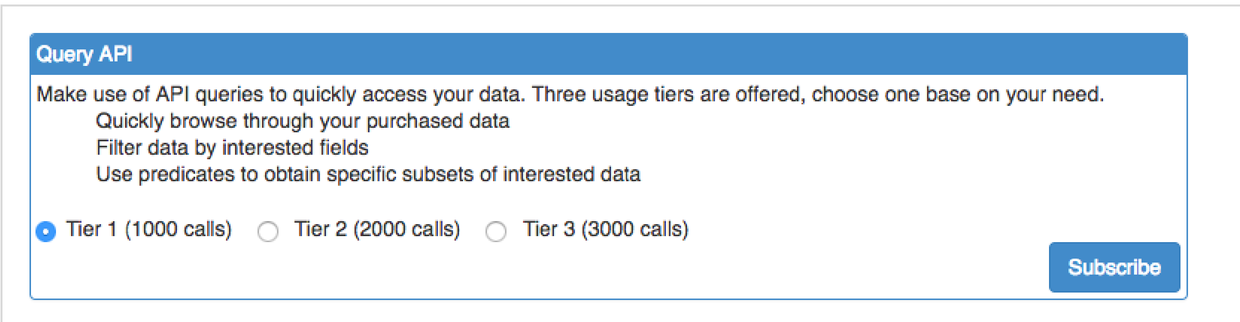
4. Entitlements

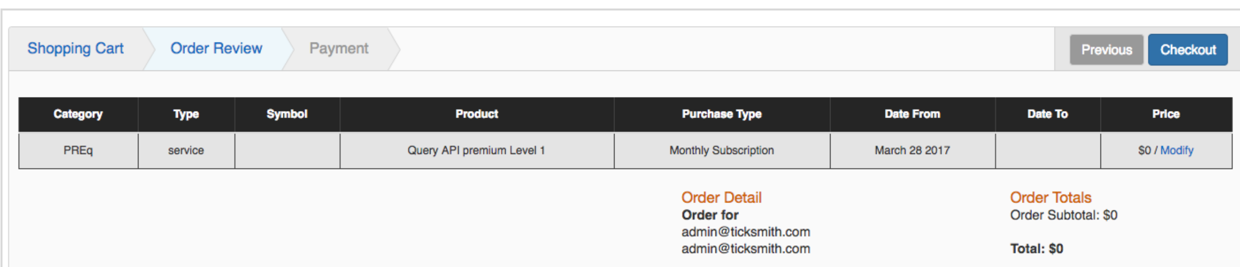
The query API product can be checked out from Datamine as a premium service. The user must have entitlements to both the underlying EOD historical data and the query api premium service for this api to return data.

The query API uses UNO authentication. Users must have a UNO API key and password from CME Datamine to make queries.

Query API Premium Service



Cart Checkout



5. Python Query API

Tickvault-python-api is a Python 3 wrapper around the Java/cURL API implementation that allows query access without the need to formulate the cURL request (or request the access token that is required to have access to the API), and returns the data in a format that is usable by Python analytics tools including numpy and pandas. The end user simply passes the desired parameters to a python method, and this takes care of the formatting of inputs to match that expected by the tks-api.

Conditional queries (such as 'price >= 30 AND volume < 100'), can be written exactly as intended and will be parsed by a DSL to be converted to the expected tks-api format without user intervention.

Currently, the Python API is able to access:

CME (CmeDatamineClient)

- EOD (query_eod)

Descriptions of the keyword arguments and return values for each of the below are already present in the code, and can be accessed by creating an object of the required client type and calling 'help(<OBJECT>)':

```
cme = CmeDatamineClient(user_name=<USER_NAME>, secret_key=<API_KEY>)

help(cme)
```

CME (CmeDatamineClient)

```
query_eod(date_from, date_to, period, product_codes, predicates="")
    Queries the EOD CME dataset with the given arguments
```

Predicate Parsing

Predicates are parsed from expressions chained with 'ands' using the PyParsing DSL.

The base of the TPA parsing system is the Operation class, which contains a dictionary of allowed operations and the suffix they add to the query. Ex. >= will result in columnGte. This dictionary is empty in the parent class and is specifically defined by this class's children. This class also contains helper methods that check if an operation is allowed and get the suffix associated with an operation.

The next level up is the Predicate class, which contains the internal variables key, operation, value and opClass. The last is an object that subclasses Operation and indicates what operations are allowed in a particular predicate. BasePredicate has BaseOperation as its opClass. The Predicate class has a __str__ method that returns:

```
key + operation + "=" + value
# Thus BaseOperation("askprice", ">=", 34) will result in askpriceGte=34
```

The DSL is found in the Parser class and is roughly defined as (pseudocode):

```
predicate = word + operation + word
and = literal("and")
language = predicate + zeroOrMore(and + predicate)
```

Allowed operations

'sign' : 'suffix'

```
'<': 'Lt',
'<=': 'Lte',
'>': 'Gt',
'>=': 'Gte',
'!=': 'Neq',
'=': 'Eq',
'==': 'Eq',
'like': 'Like'
```

6. EOD Field Value Processing

In order for clients to query fields accurately with ease, we will standardize the output of the following EOD field values:

Column Names	Values Found	Value Mapped To
Contract Day	0	[NULL]
[All int volume fields]	[NULL]	0
Product Type	OPT, FUT	O, F

TickSmith maps these field values holding the following assumptions:

- Contract Day fields cannot be 0
- Null Volume fields represent 0

List of decimal(20,7) price columns:
Strike Price, Settlement, Globex Open Price, Globex High Price, Globex Low Price, Globex Close Price, Floor Open Price, Floor Open Second Price, Floor High Price, Floor Low Price, Floor Close Price, Floor Close Second Price, Floor Post-Close Price, Floor Post-Close Second Price

List of int volume columns:
Open Interest, Total Volume, GLobex Volume, Floor Volume, PNT Volume, Block Volume, EFP Volume, EOO Volume, EFR Volume, EFS Volume, EFB Volume, EFM Volume, SUB Volume, OPNT Volume, TAS Volume, TAS Block Volume, TAM Singapore Volume, TAM Singapore Block Volume, TAM London Volume, TAM London Block Volume

Keep as is:
Delta, Implied Volatility

7. All available fields

These are all the field values the API is able return:

7.1 EOD Data

Field Name	Excel Column	Example Value	Supported Values	Description
Trade Date	A	20120801	YYYYMMDD	The trade date in YYYYMMDD format
Exchange Code	B	XCME	XCME, XCBT, XNYM, XCEC	The exchange where the product is traded.
Asset Class	C	EQUITY INDEX	AGRICULTURE, ENERGY, EQUITY INDEX, INTEREST RATES, FX, METALS	Identifies an entire suite of products.
Product Code	D	EZ	String	The code assigned to a particular product.
Clearing Code	E	EZ	String	Identifies a contract as it is known to CME Clearing.
Product Description	F	E-MINI S&P 500 OPTIONS	String	The textual description of a product.
Product Type	G	O	F, O	Designates whether the contract is a Future (F) or Option (O).
Underlying Product Code	H	0	String	If an option, the Product Code assigned to the underlying future.
Put/Call	I	C	P, C	Designates whether the contract is a Put (P) or Call (C).

Strike Price	J	1200	Decimal(20,7)	If an option, the strike price.
Contract Year	K	2012	YYYY	The year the contract expires.
Contract Month	L	8	MM	The delivery month for the future or option contract.
Contract Day	M	0	DD	Indicates the expiration day of the option contract. Only used for daily options.
Settlement	N	170.8	Decimal(20,7)	Settlement Price.
Settlement Cabinet Indicator	O	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Open Interest	P	54	Int	The open interest for the contract.
Total Volume	Q	2880	Int	The total number of contracts traded -- the sum of Globex, Floor, and PNT.
Globex Volume	R	998	Int	The number of contracts traded on Globex.
Floor Volume	S	0	Int	The number of contracts traded on the Floor.
PNT Volume	T	0	Int	The number of contracts traded in Privately-Negotiated Transactions.
Block Volume	U	1805	Int	The number of contracts traded as Blocks.

EFP Volume	V	2	Int	The number of contracts traded as Exchange-for-Physical.
EOO Volume	W	11	Int	The number of contracts traded as Exchange-of-Options-for-Options.
EFR Volume	X	6	Int	The number of contracts traded as Exchange-for-Risk.
EFS Volume	Y	24	Int	The number of contracts traded as Exchange-of Futures-for-Swaps.
EFB Volume	Z	1	Int	The number of contracts traded as Exchange-for-Basis.
EFM Volume	AA	42	Int	The number of contracts traded as Exchange-for-Minis.
SUB Volume	AB	4	Int	The number of contracts traded as Substitution-of-Futures-for-Forwards.
OPNT Volume	AC	1	Int	The number of contracts traded as OTC Privately Negotiated Transactions.
TAS Volume	AD	101	Int	The number of contracts traded as Trading-at-Settlement.
TAS Block Volume	AE	16	Int	The number of TAS contracts traded as Blocks.

TAM Singapore Volume	AF	3	Int	Trade-at-Marker volume for the Singapore marker.
TAM Singapore Block Volume	AG	0	Int	Trade-at-Marker block volume for the Singapore marker.
TAM London Volume	AH	102	Int	Trade-at-Marker volume for the London marker.
TAM London Block Volume	AI	6	Int	Trade-at-Marker block volume for the London marker.
Globex Open Price	AJ	177.3	Decimal(20,7)	The opening price for the Globex session.
Globex Open Price Bid/Ask Indicator	AK	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Globex Open Price Cabinet Indicator	AL	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Globex High Price	AM	174.5	Decimal(20,7)	Indicates the high price for the Globex session.
Globex High Price Bid/Ask Indicator	AN	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Globex High Price Cabinet Indicator	AO	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Globex Low Price	AP	173.5	Decimal(20,7)	The low price for the Globex session.

Globex Low Price Bid/Ask Indicator	AQ	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Globex Low Price Cabinet Indicator	AR	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Globex Close Price	AS	174.5	Decimal(20,7)	The closing price for the Globex session.
Globex Close Price Bid/Ask Indicator	AT	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Globex Close Price Cabinet Indicator	AU	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Floor Open Price	AV	177.3	Decimal(20,7)	The opening price for the Floor session.
Floor Open Price Bid/Ask Indicator	AW	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor Open Price Cabinet Indicator	AX	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Floor Open Second Price	AY	176	Decimal(20,7)	Lists a second price if there were multiple prices.
Floor Open Second Price Bid/Ask Indicator	AZ	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal

				(N) price.
Floor High Price	BA	177.3	Decimal(20,7)	The high price for the Floor session.
Floor High Price Bid/Ask Indicator	BB	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor High Price Cabinet Indicator	BC	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Floor Low Price	BD	173.5	Decimal(20,7)	The low price for the Floor session.
Floor Low Price Bid/Ask Indicator	BE	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor Low Price Cabinet Indicator	BF	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Floor Close Price	BG	162.5	Decimal(20,7)	The closing price for the Floor session.
Floor Close Price Bid/Ask Indicator	BH	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor Close Price Cabinet Indicator	BI	CAB	Null, CAB	Indicates that the price is based off a Cabinet (CAB) price.
Floor Close Second Price	BJ	177.7	Decimal(20,7)	Lists a second price if there were multiple prices.

Floor Close Second Price Bid/Ask Indicator	BK	A	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor Post-Close Price	BL	173.5	Decimal(20,7)	The post-close price for the Floor session.
Floor Post-Close Price Bid/Ask Indicator	BM	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Floor Post-Close Second Price	BN	174.3	Decimal(20,7)	Lists a second price if there were multiple prices.
Floor Post-Close Second Price Bid/Ask Indicator	BO	B	Null, B, A, N, $	Indicates that the price is based off a trade (null), Bid (B), Cabinet ($), Ask (A), or Nominal (N) price.
Delta	BP	0.986	Decimal(20,7)	If an option, the Delta for the contract.
Implied Volatility	BQ	0.291	Decimal(20,7)	If an option, the Implied Volatility for the contract.
Last Trade Date	BR	20120817	YYYYMMDD	The last day the contract can trade.

7.2 Block Trades Data

Extract Name	Description	Expected Values/Format	Example Outright Future	Example Spread Future
Trade Time	Time the transaction was executed.	HH:MM:SS	10:37:21	3:45:08
Trade Source	The source of the trade.	Floor, ClearPort	ClearPort	Floor
Trade Quantity 2	ONLY available for spread type code DN and FO.	Same as above, for second leg.		8000
Trade Quantity	The agreed upon quantity. This field reflects block trade quantity and not the total number of individual contracts traded.	Number	800	8000
Trade Price 2	ONLY available for spread type code DN and FO.	Same as above, for second leg.		-10.5
Trade Price	The agreed upon price.	Number	100.75	-10.5
Trade Date	Date the transaction was reported.	CCYYMMDD	20110630	20110523
Strike Price 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Strike Price 3	Same as above, for third leg.	Same as above, for third leg.		
Strike Price 2	Same as above, for second leg.	Same as above, for second leg.		
Strike Price	Strike price, if option.	Number		
Spread Type Description	Description of the spread code.	Butterfly Condor Delta Neutral Futures Bundle Futures v. Options Options Bundle Risk-Reversal Bundle Pack Butterfly Pack Pack v. Pack Intra-commodity Strip		Butterfly

		Blank if not a spread.		
Spread Type Code	Type of spread, if multiple legs.	BF CF DN FB FO OB OR PB PK PS SP SR Blank if not a spread		BF
Reported Time	Time the transaction was reported.	HH:MM	10:40	3:45
Put/Call 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Put/Call 3	Same as above, for third leg.	Same as above, for third leg.		
Put/Call 2	Same as above, for second leg.	Same as above, for second leg.		
Put/Call	Type of option.	Put, Call, Blank if Future		
Product Type 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Product Type 3	Same as above, for third leg.	Same as above, for third leg.		Future
Product Type 2	Same as above, for second leg.	Same as above, for second leg.		Future
Product Type	The type of product.	Future, Option	Future	Future
Product Code 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Product Code 3	Same as above, for third leg.	Same as above, for third leg.		ED

Product Code 2	Same as above, for second leg.	Same as above, for second leg.		ED
Product Code	Product family.	String	CL	ED
Market Sector 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Market Sector 3	Same as above, for new leg.	Same as above, for third leg.		
Market Sector 2	Same as above, for second leg.	Same as above, for second leg.		
Market Sector	Market in which product trades.	String	Crude Oil	
Exchange Code 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Exchange Code 3	Same as above, for third leg.	Same as above, for third leg.		XCME
Exchange Code 2	Same as above, for second leg.	Same as above, for second leg.		XCME
Exchange Code	The exchange that lists the product.	XNYM= New York Mercantile Exchange XCEC= Commodities Exchange Center XCME= Chicago Mercantile Exchange XCBT= Chicago Board Of Trade	XNYM	XCME
Description 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Description 3	Same as above, for third leg.	Same as above, for third leg.		Eurodollar Future
Description 2	Same as above, for second leg.	Same as above, for second leg.		Eurodollar Future
Description	Textual description of the product.	String	Crude Oil Future	Eurodollar Future
Contract Year 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Contract Year 3	Same as above, for third leg.	Same as above, for third leg.		2014

Contract Year 2	Same as above, for second leg.	Same as above, for second leg.		2013
Contract Year	Expiration year.	Number	2011	2012
Contract Symbol 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Contract Symbol 3	Same as above, for third leg.	Same as above, for third leg.		EDZ4
Contract Symbol 2	Same as above, for second leg.	Same as above, for second leg.		EDZ3
Contract Symbol	Trading symbol.	String	CLX1	EDZ2
Contract Month 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Contract Month 3	Same as above, for third leg.	Same as above, for third leg.		12
Contract Month 2	Same as above, for second leg.	Same as above, for second leg.		12
Contract Month	Expiration month.	Number	12	12
Asset Class 4	Same as above, for fourth leg.	Same as above, for fourth leg.		
Asset Class 3	Same as above, for third leg.	Same as above, for third leg.		Interest Rates
Asset Class 2	Same as above, for second leg.	Same as above, for second leg.		
Asset Class	Highest level of grouping.	String	Energy	Interest Rates
4th Leg (if applicable)				
3rd Leg (if applicable)				
2nd Leg (if applicable)				

7.3 Top of Book (BBO) Data

Field Number	Data Field	Start Position	End Position	Length	Description
1	Trade Date	1	8	8	YYYYMMDD- Day the trade or quote was entered
2	Trade Time	9	14	6	HHMMSS- Time the trade or quote was entered in the system
3	Trade Sequence Number	15	22	8	######## - sequence the quote or trade was entered into the system
4	Session Indicator	23	23	1	(R/E) Indicates the Regular (PIT) or Electronic (GLOBEX) trading session
5	Ticker Symbol	24	26	3	The product code
6	FOI Indicator	27	27	1	Futures (F) / Options (O) - Indicates the type of market data
7	Delivery Date	28	31	4	(YYMM) Indicates the month the contract expires
8	Trade Quantity	32	36	5	Number of contracts available for trade or traded
9	Strike Price	37	43	7	The strike or exercise price of the option, if applicable
10	Strike Price Decimal Locator	44	44	1	Decimal place indicator for strike price
11	Trade Price	45	51	7	Indicates actual price traded
12	Trade Price Decimal Locator	52	52	1	Decimal place indicator for traded price
13	Ask/Bid Type	53	53	1	Indicates for Bids (B) / Offers (A)
14	Indicative Quote Type	54	54	1	Indicative Market Quotes (I)
15	Market Quote	55	55	1	Indicator for Market Quotes (M)
16	Close/Open Type	56	56	1	Indicator for Open (O) / Close (C)
17	Valid Open Exception	57	58	2	Indicator for Special Open (O)
18	Post Close	59	59	1	Indicator for prices traded after the market close (P)

19	Cancel Code Type	60	60	1	Indicator for canceled prices (X)
20	Insert Code Type	61	61	1	Indicator for Inserted prices (I)
21	Fast/Late Indicator	62	62	1	Indicator for Fast/Late Market (F)
22	Cabinet Indicator	63	63	1	Indicator for cabinet trades ($)
23	Book Indicator	64	64	1	Indicator for Book quotes (B)
24	Entry Date	65	70	6	YYMMDD - Entry date of trade

7.4 Time & Sales (Tick) Data

Field Number	Data Field	Format	Heading on Extract File
A	Trade Date	YYYYMMDD	T.Date
B	Trade Time	HHMMSS	T.Time
C	Trade Sequence Number	Numeric	Sequence
D	Session Indicator	E,R	Session Ind
E	Ticker Symbol	Alphanumeric	Symbol
F	Future/Option/Index Indicator	F,P,C,I	C/P/F
G	Contract Delivery Date	YYMM	Contract Delivery
H	Trade Quantity	Numeric	Volume
I	Strike Price	Numeric	Strike Price
J	Trade Price	Numeric	T.Price
K	Ask Bid Type	Alphanumeric	A/B
L	Indicative Quote Type	Alphanumeric	IND
M	Market Quote	Alphanumeric	MKQ
N	Close Open Type	Alphanumeric	C/O
O	Valid Open Exception	Alphanumeric	VOE
P	Post Close	Alphanumeric	PC
Q	Cancel Code Type	Alphanumeric	CAN
R	Insert Code Type	Alphanumeric	INS
S	Fast Late Indicator	Alphanumeric	F/L

T	Cabinet Indicator	Alphanumeric	CAB
U	Book Indicator	Alphanumeric	BKI
V	Entry Date	YYYYMMDD	Entry Date
W	Exchange Code	Alphanumeric	exch_code

8. Notes

The fields strike_price, put_call, and contract_day queries are not applicable for futures (product_type=F) queries.

It has been adjusted for price - check in with Bill