S&P CAPITAL IQ
McGRAW HILL FINANCIAL

S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

CEF SCOACH

Reference n°: 20150812 – 26456 – 27097 – 27677

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FEEDOS™ CEF SCOACH FEED DESCRIPTION

As part of S&P Capital IQ Real-Time Solutions FeedOS™ documentation, this feed description provides you with details about the types of data broadcast on the CEF SCOACH market data stream, their possible values and current FeedOS technical implementation.

The topics this feed description covers include:

1. Referential Data

The following sections describe the characteristics of the referential data on the CEF SCOACH market data stream, in terms of:

1.1. Available Markets and Branches

This section details the list of Markets and Branches available on the CEF SCOACH market data stream.

1.1.1. Markets

The CEF SCOACH market data stream disseminates informations about the following markets:

Table 1 Markets available on the CEF SCOACH market data stream

FeedOS Market ID	Market
XETA	SCOACH Frankfurt Securities and Warrants

The following example shows the list of markets available on the CEF SCOACH market data stream and their IDs, returned by the `dumps` command:

```
market # 341    CC=DE/GERMANY/FRANKFURT,DESCR=XETRA - REGULIERTER MARKT, WEB=www.scoach.de
    MIC = XETA
    TimeZone =
    Country =
    NbMaxInstruments = 1000000
```

1.1.2. Branches

The example below shows the list of branches available on the CEF SCOACH market data stream, returned by the `dumps` command. Each branch displays the following details: `FOSMarketID`, `SecurityType`, `CFICode` and `Quantity` (of instruments):

```
BRANCHES
    { XETA NONE DBXXXX } qty: 109843
    { XETA NONE TMXXXX } qty: 1
    { XETA WAR  RWXXXX } qty: 1527861
```

1.2. Types of Instruments

This section describes the instruments available on the CEF SCOACH market data stream, according to their type:

- 1.2.1. Bonds
- 1.2.2. Warrants
- 1.2.3. Referential Instrument.

1.2.1. Bonds

The sample below illustrates the details of a bond:

```
instr # 341/590217 = 715719049
    PriceCurrency               string{EUR}
    SecurityType                string{NONE}
    FOSMarketId                 XETA
    CFICode                     string{DBXXXX}
    SecurityStatus              uint8{1}
    MarketSegmentID             string{10}
    MarketSegmentDesc           string{Börse Frankfurt Certificates & Warrants Premium}
    InternalCreationDate        Timestamp{2015-01-21 06:00:36:660}
    InternalModificationDate    Timestamp{2015-07-27 05:00:09:653}
    InternalSourceId            uint16{57}
    InternalAggregationId       uint16{57}
    InternalEntitlementId       int32{1118}
    LocalCodeStr                string{DE000DG3T9U0}
    ISIN                        string{DE000DG3T9U0}
    PriceIncrement_static       float64{0.001}
    MaturityYear                uint16{2016}
    MaturityMonth               uint8{2}
    MaturityDay                 uint8{18}
    OperatingMIC                string{XSCO}
    MARKET_XETRA_SegmentCode    string{XEXC}
```

1.2.2. Warrants

The sample below illustrates the details of a warrant:

```
instr # 341/52656 = 715181488
    PriceCurrency               string{EUR}
    SecurityType                string{WAR}
    FOSMarketId                 XETA
    CFICode                     string{RWXXXX}
    SecurityStatus              uint8{1}
    MarketSegmentID             string{10}
    MarketSegmentDesc           string{Börse Frankfurt Certificates & Warrants Premium}
    InternalCreationDate        Timestamp{2015-03-02 06:08:43:008}
    InternalModificationDate    Timestamp{2015-07-27 05:03:14:633}
    InternalSourceId            uint16{57}
    InternalAggregationId       uint16{57}
    InternalEntitlementId       int32{1118}
    LocalCodeStr                string{DE000CC75ZW0}
    ISIN                        string{DE000CC75ZW0}
    MaturityYear                uint16{2016}
    MaturityMonth               uint8{1}
    MaturityDay                 uint8{8}
    PriceIncrement_dynamic_TableId      uint32{3735652}
    OperatingMIC                string{XSCO}
    MARKET_XETRA_SegmentCode    string{XEXC}
```

1.2.3. Referential Instrument

The sample below illustrates the details of a referential instrument:

```
instr # 341/796653 = 715925485
    Description                 string{PUT / CALL Ratio Indicator}
    SecurityType                string{NONE}
    FOSMarketId                 XETA
    CFICode                     string{TMXXXX}
    SecurityStatus              uint8{1}
    MarketSegmentID             string{9}
    MarketSegmentDesc           string{Börse Frankfurt Certificates & Warrants Standard}
    InternalCreationDate        Timestamp{2014-11-24 05:57:20:936}
    InternalModificationDate    Timestamp{2015-07-27 05:01:51:961}
    InternalSourceId            uint16{57}
    InternalAggregationId       uint16{57}
    InternalEntitlementId       int32{1118}
    LocalCodeStr                string{XF0002000010}
    ISIN                        string{XF0002000010}
    OperatingMIC                string{XSCO}
```

This unique referential instrument – `XF0002000010` –, represents the Scoach®-Put/Call-Sentiment. The Scoach®-Put/Call-Sentiment is a barometer for the latest mood in trading of certificates and leverage products. It covers all orders executed on-exchange in leverage products on the DAX® underlying, measured by the volume traded. For this instrument, the quotation tags `LastPrice` contains the intraday Put-Call Ratio value.

1.3. Referential Tags

The following sections describe additional, specific referential tags available on the CEF SCOACH market data stream:

1.3.1. Description

The values of the referential tag **Description** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to characterize an instrument.

FeedOS implementation of the tag `Description` is detailed in the table below:

Table 2 Description – technical implementation in FeedOS

Component	Value	Description
Tag Name	`Description`	FeedOS tag name.
Numeric ID	`107`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value*** characterizing the instrument.

1.3.2. SecurityStatus

The values of the referential tag **SecurityStatus** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to indicate the status of an instrument.

FeedOS implementation of the tag `SecurityStatus` is described in the table below:

Table 3 SecurityStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SecurityStatus`	FeedOS tag name.
Numeric ID	`965`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`UInt8`	UInt8 data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating the status of an instrument.
Possible Values	`1`	Active (Default value)
	`2`	Inactive
	`3`	Suspended

1.3.3. MarketSegmentID

The values of the referential tag **MarketSegmentID** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to detail the ID of the market segment.

FeedOS implementation of the values currently available for the tag `MarketSegmentID` is described below:

Table 4 MarketSegmentID – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MarketSegmentID`	FeedOS tag name.
Numeric ID	`1300`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the ID of the market segment.

1.3.4. MarketSegmentDesc

The values of the referential tag **MarketSegmentDesc** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to describe the market segment.

FeedOS implementation of the values currently available for tag `MarketSegmentDesc` is described below:

Table 5 MarketSegmentDesc – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MarketSegmentDesc`	FeedOS tag name.
Numeric ID	`1396`	FeedOS unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, describing the market segment.

1.3.5. InternalModificationDate

The values of the quotation tag **InternalModificationDate** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to detail the timestamp of last modification (server time in UTC):

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `InternalModificationDate` is described in the following table:

Table 6 InternalModificationDate – technical implementation in FeedOS

Component	Value	Description
Tag Name	`InternalModificationDate`	FeedOS tag name.
Numeric ID	`9401`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Timestamp`	Timestamp data type.
Format / Possible Values	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the timestamp of last modification (server time in UTC). **Note:** This tag is updated only when there is a change in the referential data.

1.3.6. OperatingMIC

The values of the referential tag **OperatingMIC** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to specify the parent MIC.

FeedOS implementation of the tag `OperatingMIC` is described in the table below:

Table 7 OperatingMIC – technical implementation in FeedOS

Component	Value	Description
Tag Name	`OperatingMIC`	FeedOS tag name.
Numeric ID	`9533`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the parent MIC.
Possible Values	`XSCO`	Boerse Frankfurt Warrants Technical

1.3.7. MARKET_XETRA_SegmentCode

The values of the referential tag **MARKET_XETRA_SegmentCode** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Referential* to uniquely identify a particular trading area as defined by the exchange.

FeedOS implementation of the tag `MARKET_XETRA_SegmentCode` is detailed in the table below:

Table 8 MARKET_XETRA_SegmentCode – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_SegmentCode`	FeedOS tag name.
Numeric ID	`11100`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value*** uniquely identifying a particular trading area as defined by the exchange. **Note:** The values disseminated by this tag before 2015-07-27 will be disseminated by the tag `MarketSegmentDesc` (1396, String).
Possible Values	`XEXC`	Certificates and Warrants in continuous auction
	`XEXD`	Reserved exchange segment - currently not in use
	`XEXI`	IPOs of securities
	`XEXR`	Subscription rights in Single Auction
	`XEXS`	Certificates and Warrants in single auction
	`XEXY`	Securities in subscription
	`XEXZ`	Bonds in subscription
	`XEA1`	Reserved exchange segment - currently not in use
	`XEA2`	Reserved exchange segment - currently not in use
	`XEF1`	Reserved exchange segment - currently not in use
	`XEF2`	Reserved exchange segment - currently not in use

2. Quotation Data

The following sections describe the characteristics of the quotation data on the CEF SCOACH market data stream, in terms of:

2.1. Quotation Values

The example below shows the possible values of an instrument on the CEF SCOACH market data stream:

```
InstrumentStatusL1
-- 341/590217
        BID: 100.52     200000
        ASK: 100.62     200000
        LastPrice                       float64{100.38}
        LastTradeQty                    float64{1000}
        DailyHighPrice                  float64{100.38}
        DailyLowPrice                   float64{100.12}
        DailyTotalVolumeTraded          float64{0}
        DailyTotalAssetTraded           float64{0}
        LastTradePrice                  float64{98.5}
        LastTradeTimestamp              Timestamp{2015-02-11 15:01:53:910}
        InternalDailyOpenTimestamp      Timestamp{2015-08-12 05:59:00:667}
        InternalDailyCloseTimestamp     Timestamp{2015-08-11 18:00:00:631}
        InternalDailyHighTimestamp      Timestamp{2015-08-12 11:46:49:960}
        InternalDailyLowTimestamp       Timestamp{2015-08-12 07:44:26:076}
        InternalPriceActivityTimestamp  Timestamp{2015-08-12 12:46:58:340}
        TradingStatus                   5=PriceIndication
        DailyOpeningPrice               float64{100.12}
        PreviousDailyTotalVolumeTraded  float64{0}
        PreviousDailyTotalAssetTraded   float64{0}
        PreviousDailyClosingPrice       float64{100.67}
        PreviousBusinessDay             Timestamp{2015-08-11}
        CurrentBusinessDay              Timestamp{2015-08-12}
        LastAuctionPrice                float64{100.67}
        InternalDailyClosingPriceType   char{a}
        PreviousInternalDailyClosingPriceType   char{a}
        InternalLastAuctionTimestamp    Timestamp{2015-08-11 18:45:09:652}
        MARKET_XETRA_ULTRA_PLUS_InstrumentStatus   float64{39}
```

For more details about the fields and tags available in quotation data type, and their possible values, see *FeedOS Quotation Tags Guide*.

2.2. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values*:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag **TradingStatus** is described in the table below:

Table 9 TradingStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	`TradingStatus`	FeedOS tag name.
Numeric ID	`9100`	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`Enum`	Enumeration data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, concerning the characteristics of the trading status.
Possible Values	`2`	Trading Halt
	`5`	Price Indication
	`15`	New Price Indication
	`17`	Ready to Trade
	`18`	Not Available for Trading
	`21`	Pre-Open
	`23`	Fast Market

2.3. Specific Quotation Tags

The following sections describe additional quotation tags available on the CEF SCOACH market data stream:

- 2.3.1. Trade Conditions
- 2.3.2. Other Values.

2.3.1. Trade Conditions

- 2.3.1.1. MARKET_CEF_LastAuctionQty
- 2.3.1.2. MARKET_CEF_TradeTypeIndicator.

2.3.1.1. MARKET_CEF_LastAuctionQty

Each time a change of the auction quantity occurs, the values of the quotation context tag **MARKET_CEF_LastAuctionQty** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Context*:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `MARKET_CEF_LastAuctionQty` is described in the table below:

Table 10 MARKET_CEF_LastAuctionQty – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_CEF_LastAuctionQty`	FeedOS tag name.
Numeric ID	`15151`	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`Float64`	Float64 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, detailing the last auction quantity.

2.3.1.2. MARKET_CEF_TradeTypeIndicator

Each time a change of the trade type occurs, the values of the specific quotation tag **MARKET_CEF_TradeTypeIndicator** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Context*:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `MARKET_CEF_TradeTypeIndicator` is described in the table below:

Table 11 MARKET_CEF_TradeTypeIndicator – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_CEF_TradeTypeIndicator`	FeedOS tag name.
Numeric ID	`15400`	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value*** detailing the characteristics of the trade type.
Possible Values	`M (77)`	Price from Subscription Period
	`P (80)`	Last Midpoint Order Price

2.3.2. Other Values

The following sections describe the specific quotation tags available on the CEF SCOACH market data stream:

2.3.2.1. LastPrice

The values of the quotation tag **LastPrice** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the last price of an instrument:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `LastPrice` is described in the following table:

Table 12 LastPrice – technical implementation in FeedOS

Component	Value	Description
Tag Name	`LastPrice`	FeedOS tag name.
Numeric ID	`9106`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Float64`	Float64 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the last price of an instrument. **Note:** For the Referential Instrument `XF0002000010`, this tag disseminates the intraday Put-Call Ratio value. The Put-Call Ratio value describes the Scoach®-Put/Call-Sentiment, which is a barometer for the latest mood in trading of certificates and leverage products. It covers all orders executed on-exchange in leverage products on the DAX® underlying, measured by the volume traded.

2.3.2.2. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the type of internal daily closing price:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `InternalDailyClosingPriceType` is described in the table below (the values currently disseminated are highlighted in `green`):

Table 13 InternalDailyClosingPriceType – technical implementation in FeedOS

Component	Value	Description
Tag Name	`InternalDailyClosingPriceType`	FeedOS tag name.
Numeric ID	`9155`	FeedOS unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Char`	Char data type.
Format	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the type of daily closing price, as described below.

Table 13 InternalDailyClosingPriceType – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	0	**Undefined**
	a	**Official Close** – Explicit closing price value calculated and distributed by an exchange for the main trading session of a given trading day.
	b	**Official Indicative** – Exchange has provided an indicative price and marked it as indicative, however no trading activity is observed.
	c	**Official Carry Over** – Explicit Closing price value from a previous trading day carried forward by the exchange to the given trading day.
	d	**Last Price** – Final price disseminated by the exchange for the main trading session or dissemination period of a given trading day (for indices).
	e	**Last Eligible Price** – Execution price of the final trade (subject to trade qualifiers) accepted by the exchange for the main trading session of a given trading day.
	z	**Manual** – Price disseminated manually (in case of production correction).

2.3.2.3. InternalDailyOpenTimestamp

The values of the quotation tag **InternalDailyOpenTimestamp** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values* to detail the timestamp of the last `DailyOpen` signal (server timestamp UTC):

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `InternalDailyOpenTimestamp` is described in the following table:

Table 14 InternalDailyOpenTimestamp – technical implementation in FeedOS

Component	Value	Description
Tag Name	`InternalDailyOpenTimestamp`	FeedOS tag name.
Numeric ID	9300	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Timestamp`	Timestamp data type.
Format / Possible Values	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the timestamp of the last `DailyOpen` signal (server timestamp UTC).

2.3.2.4. PriceActivityMarketTimestamp

The values of the quotation tag **PriceActivityMarketTimestamp** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values* to detail the timestamp of the last LastPrice/Ask/Bid (market timestamp UTC):

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#

- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `PriceActivityMarketTimestamp` is described in the following table:

Table 15 PriceActivityMarketTimestamp – technical implementation in FeedOS

Component	Value	Description
Tag Name	`PriceActivityMarketTimestamp`	FeedOS tag name.
Numeric ID	9309	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Timestamp`	Timestamp data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the timestamp of the last LastPrice/Ask/Bid (market timestamp UTC).

2.3.2.5. MARKET_XETRA_ULTRA_PLUS_InstrumentStatus

Each time a change of the instrument status occurs, the values of the quotation tag **MARKET_XETRA_ULTRA_PLUS_InstrumentStatus** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values*:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag **MARKET_XETRA_ULTRA_PLUS_InstrumentStatus** is described in the table below:

Table 16 MARKET_XETRA_ULTRA_PLUS_InstrumentStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_ULTRA_PLUS_Instrument Status`	FeedOS tag name.
Numeric ID	14480	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`Float64`	Float64 data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, concerning the status of the instrument.
Possible Values	0	Start
	1	Pre Trading
	2	Pre-call
	3	Crossing Period
	4	Closing Crossing Period
	5	Opening Auction Call
	6	Intra Day Auction Call
	7	Closing Auction Call
	8	End Auction Call
	9	Auction Call
	10	Opening Auction IPO Call
	11	Opening Auction IPO Freeze
	12	Intra Day Auction IPO Call
	13	Intra Day Auction IPO Freeze

Table 16 MARKET_XETRA_ULTRA_PLUS_InstrumentStatus – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	14	IPO
	15	Quote Driven IPO Freeze
	16	Opening Auction Pre-Orderbook Balancing
	17	Intra Day Auction Pre-Orderbook Balancing
	18	Closing Auction Pre-Orderbook Balancing
	19	End-of-day Auction Pre-Orderbook Balancing
	20	Pre-Orderbook Balancing of Quote Driver Auction
	21	Opening Auction Orderbook Balancing
	22	Intra Day Auction Orderbook Balancing
	23	Closing Auction Orderbook Balancing
	24	End-of-day Auction Orderbook Balancing
	25	Orderbook Balancing
	26	Continuous Trading
	27	In Between Auctions
	28	Post Trading
	29	End of Trading
	30	Halt
	31	Suspend
	32	Volatility Interruption
	35	Add
	36	Delete
	38	Call Unfreeze
	39	Continuous Auction Pre-Call
	40	Continuous Auction Call
	41	Continuous Auction Freeze
	51	Knocked Out
	52	Knocked Out / Revoked
	53	Midpoint Book Freeze
	54	Midpoint Book Unfreeze

2.3.2.6. MARKET_CEF_LastTradeTradingPhase

The values of the quotation tag **MARKET_CEF_LastTradeTradingPhase** conveyed on the CEF SCOACH market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the specific trading phase of the last traded instrument:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `MARKET_CEF_LastTradeTradingPhase` is described in the table below:

Table 17 MARKET_CEF_LastTradeTradingPhase – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_CEF_LastTradeTradingPhase`	FeedOS tag name.
Numeric ID	14900	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	Char	Char data type.
Format	*[Exchange Specific Value]*	An ***exchange specific value***, detailing the specific trading phase of the last traded instrument.
Possible Values	A	Auction / Intraday IPO Auction / Continuous Auction / Midpoint Crossing
	B	Trade with Bundesbank participation
	C	Continuous Trading
	E	End-of-Day Auction
	F	Closing Auction / Vwap Crossing
	L	Liquidity Interruption
	M	Mini Auction
	O	Opening Auction / Opening IPO Auction
	S	Special Auction
	U	Price from Subscription period
	V	Volatility Interruption in Continuous Trading

2.4. MBL and MBO Data*

There is no MBL or MBO.

3. Closing Price

The closing price is the last trade price upon close, as provided by the exchange. The settlement price is handled when provided by the market.

4. Special Behavior

The following sections describe the special behavior of the CEF SCOACH market data stream in terms of:

- 4.1. Level1 Market Data Kinematics – OPEN

* The MBL and MBO data may not be included by default in your Level1 data subscription, but sold separately. Depending on your contract, additional terms, conditions and fees may apply. For more details about the subscription options, please contact S&P Capital IQ Real-Time Solutions.

4.1. Level1 Market Data Kinematics – OPEN

In the Level1 Market Data Kinematics **before 2015-07-06**, the OPEN signal was sent when the first trade occurred, as shown in the example below:

```
“TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"

TE   06:00:58:954   716246699    *   *   3.83    200000  3.84    200000
TE   06:00:59:018   716246699    *   *   3.82    200000  3.83    200000
....
VU   07:00:01:196   716246699    TradingStatus=2
....
SI   07:00:03:627   716246699    OPEN    3.64
TE   07:00:03:627   716246699    3.64    500     *       *       *       *       OHL
...
VU   07:00:03:627   716246699    TradingStatus=5
..
VU   07:51:42:850   716246699    TradingStatus=2
...
VU   07:51:43:332   716246699    TradingStatus=5
```

In the Level1 Market Data Kinematics **after 2015-07-06**, the OPEN signal is trade-independent and sent at 05:59 UTC, as shown in the example below:

```
“TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"

VU   05:59:04:166   716246699    OPEN   TradingStatus=5
TE   06:00:58:954   716246699    *   *   3.83    200000  3.84    200000
TE   06:00:59:018   716246699    *   *   3.82    200000  3.83    200000
...
VU   07:00:01:196   716246699    TradingStatus=2
.....
TE   07:00:03:627   716246699    3.64    500                             OHL
...
VU   07:00:03:627   716246699    TradingStatus=5
..
VU   07:51:42:850   716246699    TradingStatus=2
...
VU   07:51:43:332   716246699    TradingStatus=5
```

5. Finding the Latest Information

For the latest documentation and product updates, additional support and training, please contact our support services one of the following ways:

- E-mail: rts-support@spcapitaliq.com
- Web: https://support.quanthouse.com.