



S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

CEF SCOACH

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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
- 2. Quotation Data
- 3. Closing Price
- 4. Special Behavior
- 5. Finding the Latest Information.

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
- 1.2. Types of Instruments
- 1.3. Referential Tags.

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:

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
                                string{DBXXXX}
   CFICode
   SecurityStatus
                                uint8{1}
   MarketSegmentID
                                string{10}
   MarketSegmentDesc
                                string{Börse Frankfurt Certificates & Warrants Premium}
                                Timestamp{2015-01-21 06:00:36:660}
   InternalCreationDate
   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}
                                string{Börse Frankfurt Certificates & Warrants Premium}
   MarketSegmentDesc
   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
                                string{TMXXXX}
   CFTCode
   SecurityStatus
                                uint8{1}
   MarketSegmentID
                                string{9}
                                string{Börse Frankfurt Certificates & Warrants Standard}
   MarketSegmentDesc
   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
- 1.3.2. SecurityStatus
- 1.3.3. MarketSegmentID
- 1.3.4. MarketSegmentDesc
- 1.3.5. InternalModificationDate
- 1.3.6. OperatingMIC
- 1.3.7. MARKET_XETRA_SegmentCode.

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.
Туре	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.
Туре	UInt8	UInt8 data type.
Format	[Exchange Specific Value]	An exchange specific value , indicating the status of an instrument.
	1	Active (Default value)
Possible Values	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.
Туре	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.
Туре	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 Levell event quotNotifTradeEventExt, for Java.

FeedOS implementation of the tag Internal ModificationDate 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.
Туре	Timestamp	Timestamp data type.
Format / Possible Values	[Internal Specific Value]	An <i>internal specific value</i> , 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.
Туре	String	String data type.
Format	[Exchange Specific Value]	An exchange specific value, specifying the parent MIC.
Possible Values	XSC0	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.
Туре	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).
	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
Possible Values	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
- 2.2. TradingStatus
- 2.3. Specific Quotation Tags
- 2.4. MBL and MBO Data.

2.1. Quotation Values

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

```
InstrumentStatusL1
-- 341/590217
                        200000
       BID: 100.52
       ASK: 100.62
                        200000
       LastPrice
                                        float64{100.38}
       LastTradeQty
                                        float64{1000}
                                        float64{100.38}
       DailyHighPrice
       DailyLowPrice
                                        float64{100.12}
                                        float64{0}
       DailyTotalVolumeTraded
        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}
                                        char{a}
        InternalDailyClosingPriceType
        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 Levell 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.
Туре	Enum	Enumeration data type.
Format	[Exchange Specific Value]	An exchange specific value , as described below, concerning the characteristics of the trading status.
	2	Trading Halt
	5	Price Indication
	15	New Price Indication
Possible Values	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 Levell 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.
Туре	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 Levell 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.
Туре	String	String data type.
Format	[Exchange Specific Value]	An exchange specific value detailing the characteristics of the trade type.
Possible	M (77)	Price from Subscription Period
Values	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
- 2.3.2.2. InternalDailyClosingPriceType
- 2.3.2.3. InternalDailyOpenTimestamp
- 2.3.2.4. PriceActivityMarketTimestamp
- 2.3.2.5. MARKET_XETRA_ULTRA_PLUS_InstrumentStatus
- 2.3.2.6. MARKET_CEF_LastTradeTradingPhase.

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 Levell 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.
Туре	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 Levell 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.
Туре	Char	Char data type.
Format	[Internal Specific Value]	An <i>internal specific value</i> , detailing the type of daily closing price, as described below.

Table 13 Internal Daily Closing Price Type – 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.
	С	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).
	е	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. Internal Daily Open Timestamp

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 Levell event quotNotifTradeEventExt, for Java.

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

Table 14 Internal Daily Open Timestamp – technical implementation in Feed OS

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.
Туре	Timestamp	Timestamp data type.
Format / Possible Values	[Internal Specific Value]	An <i>internal specific value</i> , 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 Levell 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.
Туре	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 Levell 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.
Туре	Float64	Float64 data type.
Format	[Exchange Specific Value]	An exchange specific value , as described below, concerning the status of the instrument.
	0	Start
	1	Pre Trading
	2	Pre-call
	3	Crossing Period
	4	Closing Crossing Period
	5	Opening Auction Call
Possible Values	6	Intra Day Auction Call
rossible values	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
	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
Possible Values	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 Levell 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.
Туре	Char	Char data type.
Format	[Exchange Specific Value]	An exchange specific value , detailing the specific trading phase of the last traded instrument.
	А	Auction / Intraday IPO Auction / Continuous Auction / Midpoint Crossing
	В	Trade with Bundesbank participation
	С	Continuous Trading
	E	End-of-Day Auction
Possible	F	Closing Auction / Vwap Crossing
Values	L	Liquidity Interruption
	М	Mini Auction
	0	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"
                    716246699
TF
     06:00:58:954
                                         3.83
                                                  200000 3.84
                                                                  200000
                                                  200000 3.83
     06:00:59:018
                    716246699
                                         3.82
                                                                  200000
ΤE
VU
     07:00:01:196
                    716246699
                                 TradingStatus=2
. . . .
     07:00:03:627
                    716246699
                                          3.64
                                 OPEN
SI
                                          500
TE
     07:00:03:627
                    716246699
                                 3.64
                                                                                   OHI
VU
     07:00:03:627
                    716246699
                                 TradingStatus=5
VU
     07:51:42:850
                    716246699
                                 TradingStatus=2
     07:51:43:332
                    716246699
                                 TradingStatus=5
VU
```

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
ΤE
     06:00:58:954
                    716246699
                                         3.83
                                                  200000
                                                          3.84
                                                                  200000
     06:00:59:018
                    716246699
                                          3.82
                                                  200000 3.83
                                                                  200000
TE
. . .
VU
     07:00:01:196
                    716246699
                                 TradingStatus=2
TE
    07:00:03:627
                    716246699
                                 3.64
                                          500
                                                                              OHL
     07:00:03:627
                    716246699
                                 TradingStatus=5
VU
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.