S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

CHIX EUROPE

Reference n°: 20150520 – 23648 – 26694

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Reference 20150520 – 23648 – 26694
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FEEDOS™ CHIX EUROPE 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 CHIX EUROPE 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 CHIX EUROPE market data stream, in terms of:

1.1. Available Markets and Branches

This section details the list of Markets and Branches available on the CHIX EUROPE market data stream.

1.1.1. Markets

The CHIX EUROPE market data stream broadcasts informations about the following markets:

Table 1 Markets available on the CHIX EUROPE market data stream

FeedOS Market ID	Market
CHIX	Chi-X Europe

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

```
MARKETS
market # 366    CC=GB/UNITED KINGDOM/LONDON,DESCR=INSTINET CHI-X LTD., WEB=www.instinet.com
    MIC = CHIX
    TimeZone = Europe/London
    Country = GB
    NbMaxInstruments = 2000000
```

1.1.2. Branches

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

```
BRANCHES
    { CHIX CS   ESXXXA } qty: 7
    { CHIX CS   ESXXXX } qty: 3330
    { CHIX EUCD ESXXXA } qty: 94
    { CHIX MF   EUXXXE } qty: 1224
    { CHIX MF   EUXXXX } qty: 102
    { CHIX NONE EXXXXX } qty: 62
```

1.2. Types of Instruments

The following sections describe the instruments available on the CHIX EUROPE market data stream, according to their type:

1.2.1. Equities

The sample below illustrates the details of an equity:

```
instr # 366/750016 = 768307648
    PriceCurrency               string{GBX}
    Symbol                      string{AALl}
    Description                 string{Anglo American PLC}
    MaxFloor                    float64{40306350}
    SecurityType                string{CS}
    FOSMarketId                 CHIX
    CFICode                     string{ESXXXX}
    SecuritySubType             string{EQTY}
    SecurityGroup               string{1}
    InternalCreationDate        Timestamp{2013-03-02 12:56:20:077}
    InternalModificationDate    Timestamp{2015-05-20 05:00:08:795}
    InternalSourceId            uint16{34}
    InternalEntitlementId       int32{1007}
    LocalCodeStr                string{AALl}
    ForeignFOSMarketId          XLON
    ForeignMarketId             string{XLON}
    ISIN                        string{GB00B1XZS820}
    ReutersInstrumentCode       string{AALl.CHI}
    BloombergTicker             string{AAL IX Equity}
    PriceIncrement_dynamic_TableId      uint32{2228329}
    PrimaryReutersInstrumentCode        string{AAL.L}
    PrimaryBloombergTicker      string{AAL LN Equity}
    UMTF                        string{AALl}
    OperatingMIC                string{BCXE}
    SegmentMIC                  string{CHIX}
    EMCF_Eligible               bool{True}
    XCLEAR_Eligible             bool{True}
    LCH_Clearnet_Eligible       bool{True}
    CCP_Eligible                bool{False}
```

1.3. Specific Referential Tags

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

1.3.1. SecuritySubType

The values of the referential tag **SecuritySubType** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to specify additional details about the securities associated with the CFI Codes of the market.

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

Table 2 SecuritySubType – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SecuritySubType`	FeedOS tag name.
Numeric ID	`762`	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***, detailing the securities associated with the market's CFI Codes.
Possible Values	`EQTY`	Equity Share
	`DR`	Depository Receipt
	`ETF`	Exchange Traded Fund

Based on the values conveyed by the tag `SecuritySubType`, S&P Capital IQ Real-Time Solutions sets the values associated with the tags `CFICode` and `SecurityType`, as described in the table below:

Table 3 Security Subtype – CFI Code – Security Type affinity

Security Subtype	CFI Code	Security Type
`EQTY`	`ESXXXX`	CS
`DR`	`ESXXXA`	CS
`ETF`	`EUXXXX`	MF

1.3.2. ReutersInstrumentCode

The values of the referential tag **ReutersInstrumentCode** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to detail the code used by Thomson Reuters to identify financial instruments.

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

Table 4 ReutersInstrumentCode – technical implementation in FeedOS

Component	Value	Description
Tag Name	`ReutersInstrumentCode`	FeedOS tag name.
Numeric ID	`9508`	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 code used by Thomson Reuters to identify financial instruments.

1.3.3. EMCF_Eligible

The values of the referential tag **EMCF_Eligible** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to specify whether an instrument is enabled for clearing with EMCF.

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

Table 5 EMCF_Eligible – technical implementation in FeedOS

Component	Value	Description
Tag Name	`EMCF_Eligible`	FeedOS tag name.
Numeric ID	`9547`	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	`Bool`	Bool data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing whether an instrument is enabled for clearing with EMCF.
Possible Values	`True`	EMCF enabled.
	`False`	Default value, not sent.

1.3.4. XCLEAR_Eligible

The values of the referential tag **XCLEAR_Eligible** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to specify whether an instrument is enabled for clearing with SIX X-CLEAR.

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

Table 6 XCLEAR_Eligible – technical implementation in FeedOS

Component	Value	Description
Tag Name	`XCLEAR_Eligible`	FeedOS tag name.
Numeric ID	`9548`	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	`Bool`	Bool data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing whether an instrument is enabled for clearing with SIX X-CLEAR.
Possible Values	`True`	SIX X-CLEAR enabled.
	`False`	Default value, not sent.

1.3.5. LCH_Clearnet_Eligible

The values of the referential tag **LCH_Clearnet_Eligible** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to specify whether an instrument is enabled for clearing with LCH Clearnet.

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

Table 7 LCH_Clearnet_Eligible – technical implementation in FeedOS

Component	Value	Description
Tag Name	`LCH_Clearnet_Eligible`	FeedOS tag name.
Numeric ID	`9549`	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	`Bool`	Bool data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing whether an instrument is enabled for clearing with LCH Clearnet.
Possible Values	`True`	LCH Clearnet enabled.
	`False`	Default value, not sent.

1.3.6. CCP_Eligible

The values of the referential tag **CCP_Eligible** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Referential* to specify whether an instrument is enabled for clearing with EuroCCP.

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

Table 8 CCP_Eligible – technical implementation in FeedOS

Component	Value	Description
Tag Name	`CCP_Eligible`	FeedOS tag name.
Numeric ID	`9552`	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	`Bool`	Bool data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing whether an instrument is enabled for clearing with EuroCCP.
Possible Values	`True`	CCP eligibility and post trade anonymity.
	`False`	Default value, not sent.

2. Quotation Data

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

2.1. Quotation Values

The example below shows the possible values of an instrument on the CHIX EUROPE market data stream:

```
InstrumentStatusL1
-- 366/750016
        BID: 1059.5     1994    @6
        ASK: 1060.5     2621    @5
        LastPrice                       float64{1060}
        LastTradeQty                    float64{912}
        DailyHighPrice                  float64{1068}
        DailyLowPrice                   float64{1036.5}
        DailyTotalVolumeTraded          float64{325880}
        DailyTotalAssetTraded           float64{343581594}
        LastTradePrice                  float64{1060}
        LastTradeTimestamp              Timestamp{2015-05-20 09:16:58:699}
        InternalDailyOpenTimestamp      Timestamp{2015-05-20 07:00:00:001}
        InternalDailyCloseTimestamp     Timestamp{2015-05-19 15:30:00:002}
        InternalDailyHighTimestamp      Timestamp{2015-05-20 07:39:25:475}
        InternalDailyLowTimestamp       Timestamp{2015-05-20 07:05:42:602}
        InternalPriceActivityTimestamp  Timestamp{2015-05-20 09:17:01:507}
        TradingStatus                   17=ReadyToTrade
        LastOffBookTradePrice           float64{1060}
        LastOffBookTradeQty             float64{281}
        LastOffBookTradeTimestamp       Timestamp{2015-05-20 08:58:31:008}
        DailyOpeningPrice               float64{1058}
        PreviousDailyTotalVolumeTraded  float64{1231097}
        PreviousDailyTotalAssetTraded   float64{1307731614.5}
        PreviousDailyClosingPrice       float64{1062}
        PreviousBusinessDay             Timestamp{2015-05-19}
        CurrentBusinessDay              Timestamp{2015-05-20}
        DailyTotalOffBookVolumeTraded   float64{26402}
        DailyTotalOffBookAssetTraded    float64{27700234.25}
        PreviousInternalDailyClosingPriceType   char{a}
        PriceActivityMarketTimestamp    Timestamp{2015-05-20 09:17:01:507}
        InternalDailyBusinessDayTimestamp       Timestamp{2015-05-20 07:00:00:001}
        TradingReferencePrice           float64{1062}
```

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

2.1.1. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the CHIX EUROPE 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 following table (newly added values are in `green`):

Table 9 Trading Status of the CHIX EUROPE market data stream – 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. This 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	Whenever an instrument is halted.
	5	Price Indication	07:50-08:00 London Local Time
	15	New Price Indication	Whenever the Price Indication is extended, for price matching. See also the section 4. Multi-Session Kinematics.
	16	Trade Dissemination Time	16:30-16:50 London Local Time
	17	Ready to Trade	08:00-16:30 London Local Time
	18	Not Available for Trading	16:50-07:50 London Local Time

2.2. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the CHIX EUROPE 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 following table:

Table 10 TradingStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	`TradingStatus`	FeedOS tag name.
Numeric ID	9100	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	`Enum`	Enum data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the characteristics of the trading status.
Possible Values	2	Trading Halt
	5	Price Indication
	16	Trade Dissemination Time – 16:30 London Local Time
	17	Ready to Trade – 08:00 London Local Time
	18	Not Available for Trading – 16:50 London Local Time

2.3. Specific Quotation Tags

The following section describes specific quotation tags available on the CHIX EUROPE market data stream:

2.3.1. Trade Conditions

The following subsections describe the trade conditions on the CHIX EUROPE market data stream:

2.3.1.1. TradeID

Each time a trade occurs, the values of the quotation tag **TradeID** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Context* to detail the unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty:

- 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 values currently available for the tag `TradeID` is described in the table below:

Table 11 TradeID – technical implementation in FeedOS

Component	Value	Description
Tag Name	`TradeID`	FeedOS tag name.
Numeric ID	`1003`	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]`*** ***`Expressed in base 10 (previously in base 36).`***	An ***exchange specific value***, detailing the unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.

2.3.1.2. AggressorSide

Each time a trade occurs, the values of the quotation context tag **AggressorSide** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS's data stream in *Context*, to indicate whether the aggressor is a buyer or a seller:

- 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 `AggressorSide` is described in the following table:

Table 12 AggressorSide – technical implementation in FeedOS

Component	Value	Description
Tag Name	`AggressorSide`	FeedOS tag name.
Numeric ID	`9356`	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	`Char`	Char data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating whether the aggressor is a buyer or a seller.
Possible Values	`Space`	No aggressor
	`1`	Buy Side
	`2`	Seller Side

2.3.1.3. OriginFOSMarketIdOf_LastPrice

The values of the quotation tag **OriginFOSMarketIdOf_LastPrice** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Context* to identify the market from which the last price originates, if this market is recorded in the normalized inventory of S&P Capital IQ Real-Time Solutions:

- 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.

QuantFEED® implementation of the tag `OriginFOSMarketIdOf_LastPrice` is described in the table below:

Table 13 OriginFOSMarketIdOf_LastPrice – technical implementation in FeedOS

Component	Value	Description
Tag Name	`OriginFOSMarketIdOf_LastPrice`	FeedOS tag name.
Numeric ID	`9350`	FeedOS unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`UInt16`	UInt16 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, identifying the market from which the last price originates, if this market is recorded in the normalized inventory of S&P Capital IQ Real-Time Solutions.

2.3.1.4. MMTFlagsV2

The values of the quotation tag **MMTFlagsV2** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Context* to detail the Market Model Typology (version 2) applicable to the trade:

- 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 `MMTFlagsV2` is described in the table below:

Table 14 MMTFlagsV2 – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MMTFlagsV2`	FeedOS tag name.
Numeric ID	`9901`	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] 10-character long`*	An ***exchange specific value***, detailing the Market Model Typology (version 2) applicable to the trade.
Possible Values	**MMT Level 1 - MARKET MECHANISM – OFFSET 1**	
	`1`	Central Limit Order Book
	`2`	Quote Driven Market
	`3`	Dark Order Book
	`4`	Off Book
	MMT Level 2 - TRADING MODE – OFFSET 2	
	`1`	Undefined Auction
	`2`	Continuous Trading
	`3`	At Market Close Trading
	`4`	Out of Main Session Trading
	`5`	Trade Reporting (On Exchange)
	`6`	Trade Reporting (Off Exchange)
	`7`	Trade Reporting (Systematic Internaliser)
	`O`	Scheduled Opening Auction
	`K`	Scheduled Closing Auction
	`I`	Scheduled Intraday Auction
	`U`	Unscheduled Auction
	MMT Level 3 - TRANSACTION TYPE	
	3.1. TRANSACTION CATEGORY – OFFSET 3	
	`P`	Plain-Vanilla Trade
	`D`	Dark Trade
	`T`	Technical Trade
	`G`	Give-up/Give-In Trade
	`F`	Trade with Conditions
	3.2. NEGOTIATED TRANSACTION INDICATOR – OFFSET 4	
	`N`	Negotiated Trade
	`-`	No Negotiated Trade
	3.3. CROSSING TRADE INDICATOR – OFFSET 5	
	`X`	Crossing Trade
	`-`	No Crossing Trade
	3.4. MODIFICATION INDICATOR – OFFSET 6	
	`C`	Trade Cancellation
	`A`	Trade Amendment
	`-`	New Trade

Table 14 MMTFlagsV2 – technical implementation in FeedOS (Continued)

Component	Value	Description
	3.5. BENCHMARK INDICATOR – OFFSET 7	
Possible Values	B	Benchmark Trade
	-	No Benchmark Trade
	3.6. EX/CUM DIVIDEND INDICATOR – OFFSET 8	
	E	Ex/cum dividend Trade
	-	No Ex/Cum Dividend Trade
	MMT Level 4 - PUBLICATION MODE – OFFSET 9	
	-	Immediate Publication
	1	Non Immediate Publication
	3.7. OFF BOOK AUTOMATED INDICATOR – OFFSET 10	
	Q	Automated
	M	Manual
	-	Not Specified

2.3.1.5. MARKET_BATS_AuctionType

The values of the quotation tag **MARKET_BATS_AuctionType** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Context* to detail the auction type:

- 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_BATS_AuctionType` is described in the table below:

Table 15 MARKET_BATS_AuctionType – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_BATS_AuctionType`	FeedOS tag name.
Numeric ID	14850	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***, detailing the auction type.
Possible Values	C	Closing Auction
	H	Halt Auction
	O	Opening Auction
	V	Volatility Auction

2.3.1.6. MARKET_BATS_TradeReportFlags

The values of the quotation tag **MARKET_BATS_TradeReportFlags** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Context* to identify the trade timing indicator and BATS Transaction Sub-Category:

- 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.

QuantFEED® implementation of the tag `MARKET_BATS_TradeReportFlags` is described in the table below:

Table 16 MARKET_BATS_TradeReportFlags – technical implementation in FeedOS

Component	Value	Description	
Tag Name	`MARKET_BATS_TradeReportFlags`	FeedOS tag name.	
Numeric ID	`16151`	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	`UInt16`	UInt16 data type.	
Format	*`[Exchange Specific Value]`*	**BATS Trade Timing Indicator**	An ***exchange specific value***, indicating the trade timing indicator.
Possible Values	`45`	`-`	Otherwise
	`49`	`1`	Traded reported as "late"
	`50`	`2`	Traded reported as "out of the Main Session"

2.3.2. Other Values

The following subsections describe the other values available on the CHIX EUROPE market data stream:

- 2.3.2.1. LastAuctionImbalanceSide
- 2.3.2.2. InternalDailyClosingPriceType.

2.3.2.1. LastAuctionImbalanceSide

The values of the quotation tag **LastAuctionImbalanceSide** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the imbalance side of a closing auction:

- 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 `LastAuctionImbalanceSide` is described below:

Table 17 LastAuctionImbalanceSide – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`LastAuctionImbalanceSide`	FeedOS tag name.
Numeric ID	`9151`	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	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the imbalance side of a closing auction.
Possible Values	`B`	Buy
	`S`	Sell

2.3.2.2. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the CHIX EUROPE market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the type of the 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 (currently disseminated values are in `green`):

Table 18 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.
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).

2.4. MBL and MBO Data*

The MBL book has a 10-level depth. The MBO book is full depth.

* 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.

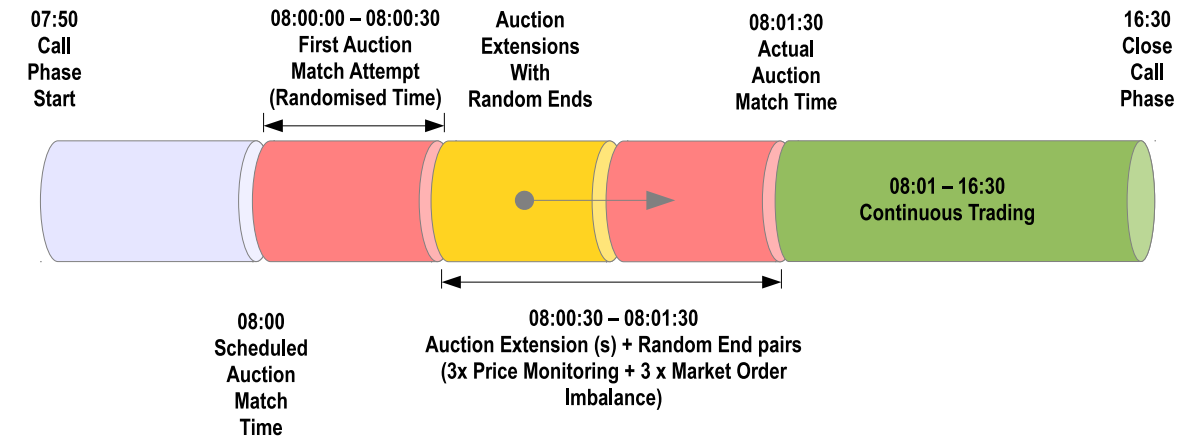
3. Official Closing Price

The closing price is the last trade price upon close.

4. Multi-Session Kinematics

Effective 2015-01-30, the exchange has introduced Opening and Closing Auctions for the BATS Regulated Market Listed ETF (REGM segment) securities. The auction phases can be extended until the prices are matched, as shown in the following diagram:

Figure 1 Auction Phase Example



5. Special Behavior

The following sections describe the special behavior of the CHIX EUROPE market data stream in terms of:

- 5.1. Addition of the AT BEST Prices.

5.1. Addition of the AT BEST Prices

Effective 2015-01-30, during an auction, the exchange notifies the AT BEST prices for the BATS Regulated Market Listed ETF (REGM segment) securities available on the CHIX EUROPE market data stream, 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..."

TE   06:09:00:939.722   768309740   *   *   !   0   !   0
VU   06:09:01:956.007   768309740   InternalDailyClosingPriceType=a
VU   06:09:01:956.007   768309740   TradingStatus=18
VU   07:50:00:072.865   768309740   TradingStatus=5
VU  07:50:00:072.865  768309740  MARKET_BATS_AuctionType=O  LastAuctionImbalanceVolume=0
LastAuctionImbalanceSide=N   LastAuctionVolume=?   LastAuctionPrice=9.5
TE   07:51:21:842.038   768309740   *   *   AT_BEST   2000@1   *   *
TE   07:51:24:743.920   768309740   *   *   AT_BEST   2020@2   *   *
```

6. 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.