S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

OSLO FAST

Reference n°: 20150403 – 22947 – 26175

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

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Reference 20150403 – 22947 – 26175
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France Offices
52 Rue de la Victoire
75009 Paris
France
Tel: +33 (0) 1 73 02 32 11

US Offices
55 Water Street, 44th floor
New York, NY 10041
United States of America
Tel: +1-(212)-438-4346

130 East Randolph
One Prudential Plaza, Suite 2900
Chicago, IL 60601
United States of America
Tel: +1-(312)-233-7129

UK Office
20 Canada Square
Canary Wharf
London E14 5LH
United Kingdom
Tel: +44 (0) 203 107 1676

Singapore Office
12 Marina Boulevard
#23-01 Marina Bay
Financial Centre Tower 3
Singapore 018982
Tel: +65 6530 6546

www.capitaliq.com

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FEEDOS™ OSLO FAST 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 OSLO FAST 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. Official Closing Price
- 4. Finding the Latest Information.

1. Referential Data

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

- 1.1. Available Markets and Branches
- 1.2. Types of Instruments.

1.1. Available Markets and Branches

This section details the list of markets and branches available on the OSLO FAST market data stream:

- 1.1.1. Markets
- 1.1.2. Branches.

1.1.1. Markets

The OSLO FAST market data stream broadcasts informations about the following markets:

Table 1 List of markets available on the OSLO FAST market data stream

FeedOS Market ID	Market
XOSL	Oslo Børs
BURG	Burgundy Nordic MTF
XOAM	Oslo Børs Alternative Bond Market
XOAS	Oslo Axess

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

```
MARKETS
market # 187    CC=NO/NORWAY/OLSO,DESCR=OSLO BORS,WEB=www.ose.no
    MIC = XOSL
    TimeZone = Europe/Oslo
    Country = NO
    NbMaxInstruments = 2000000
market # 437    CC=NO/NORWAY/OLSO,DESCR=OSLO BORS ALTERNATIVE BOND
MARKET,WEB=www.abmportal.no
    MIC = XOAM
    TimeZone = Europe/Oslo
    Country = NO
    NbMaxInstruments = 2000000
market # 439    CC=NO/NORWAY/OLSO,DESCR=OSLO AXESS,WEB=www.osloaxess.no
    MIC = XOAS
    TimeZone = Europe/Oslo
    Country = NO
    NbMaxInstruments = 2000000
```

1.1.2. Branches

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

```
BRANCHES
    { XOSL GO   DBXXXX } qty: 702
    { XOSL INDEX MRIXXX } qty: 113
    { XOSL NONE DBXXXX } qty: 337
    { XOSL NONE MRIXXX } qty: 11
    { XOAM GO   DBXXXX } qty: 1211
    { XOAM NONE DBXXXX } qty: 348
```

1.2. Types of Instruments

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

- 1.2.1. Bonds
- 1.2.2. Indices.

1.2.1. Bonds

The sample below illustrates the details of a bond:

```
instr # 187/756993 = 392924417
    PriceCurrency                string{NOK}
    Symbol                       string{SORB26}
    Issuer                       string{Sparebanken S¦r Boligkreditt AS}
    Description                  string{Spb S¦r Boligkreditt AS 15/20 FRN COVD}
    SecurityType                 string{GO}
    FOSMarketId                  XOSL
    CFICode                      string{DBXXXX}
    CountryOfIssue               string{NO}
    RoundLot                     float64{1000000}
    SecuritySubType              string{BO}
    SecurityGroup                string{OBOC}
    InternalCreationDate         Timestamp{2015-03-30 01:01:02:813}
    InternalModificationDate     Timestamp{2015-04-02 01:01:02:800}
    InternalSourceId             uint16{141}
    InternalAggregationId        uint16{141}
    InternalEntitlementId        int32{1084}
    LocalCodeStr                 string{1301607}
    ISIN                         string{NO0010733421}
    PriceIncrement_static        float64{0.01}
    OperatingMIC                 string{XOSL}
    SegmentMIC                   string{}
    MARKET_LSE_NormalMarketSize  float64{1000000}
    MARKET_LSE_SegmentCode       string{OBOC}
```

1.2.2. Indices

The sample below illustrates the details of an index:

```
instr # 187/755054 = 392922478
    Symbol                       string{OBXW}
    Description                  string{OBX Volume-weigthed Index}
    SecurityType                 string{INDEX}
    FOSMarketId                  XOSL
    CFICode                      string{MRIXXX}
    InternalCreationDate         Timestamp{2013-03-18 02:01:01:271}
    InternalModificationDate     Timestamp{2014-06-16 01:01:02:015}
    InternalSourceId             uint16{141}
    InternalEntitlementId        int32{1086}
    LocalCodeStr                 string{NO0000000013}
    ISIN                         string{NO0000000013}
    OperatingMIC                 string{XOSL}
```

1.3. Specific Referential Tags

The following sections describe specific referential tags available on the OSLO FAST market data stream:

- 1.3.1. OperatingMIC and SegmentMIC
- 1.3.2. MARKET_LSE_NormalMarketSize

- 1.3.3. MARKET_LSE_SegmentCode.

1.3.1. OperatingMIC and SegmentMIC

The values of the referential tags **OperatingMIC** and **SegmentMIC** conveyed on the OSLO FAST market data stream are disseminated via FeedOS in *Referential* to reflect exchange adoption of the ISO 10383:2012 standard. This new edition of the ISO standard refines the level of granularity on OSLO FAST market data stream, by introducing two levels of MIC codes – *operating* (parent-like) and *market segment* (child-like) MICs.

FeedOS's implementation of the tags `OperatingMIC` and `SegmentMIC` is described in the following table:

Table 2 OperatingMIC and SegmentMIC – technical implementation in FeedOS

Component	Value		Description
Tag Name	`OperatingMIC`	`SegmentMIC`	FeedOS tag name.
Numeric ID	`9533`	`9534`	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`	String data type.
Format	*`[Exchange Specific Value]`*	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the parent and child MICs.
Possible Values	`XOSL`	`BURG`	BURGUNDY NORDIC MTF
		`XOAM`	NORDIC ALTERNATIVE BOND MARKET
		`XOAS`	OSLO AXESS

1.3.2. MARKET_LSE_NormalMarketSize

The values of the referential tag **MARKET_LSE_NormalMarketSize** conveyed on the OSLO FAST market data stream are disseminated via FeedOS market data stream in *Referential* to detail the size of the transaction.

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

Table 3 MARKET_LSE_NormalMarketSize – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_LSE_NormalMarketSize`	FeedOS tag name.
Numeric ID	`11000`	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 size of the transactions.

1.3.3. MARKET_LSE_SegmentCode

The values of the referential tag **MARKET_LSE_SegmentCode** conveyed on the OSLO FAST market data stream are disseminated via FeedOS market data stream in *Referential* to uniquely identify a specific trading area as defined by Oslo Børs.

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

Table 4 MARKET_LSE_SegmentCode – technical implementation in FeedOS

Component	Value	Description
Tag Name	MARKET_LSE_SegmentCode	FeedOS tag name.
Numeric ID	11002	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions's 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 specific trading area, as described below.
Possible Values	OABM	Oslo ABM. This segment will support both order entry and off book trade reporting (manual trades). Automatic executions will not be supported but the participant's member ID will be disseminated with the order details message. Off book reporting (manual trades) must be reported through the Millennium system.
	OABT	Oslo ABM Telephone. This segment will support both order entry and off book trade reporting (manual trades). Automatic executions will not be supported but the participant's member ID will be disseminated along with the order details message. Off book reporting (manual trades) must be reported through the Millennium system, but are not visible to the market. At beginning of Post Close an average price and traded volume will be published for each instrument traded that day.
	OBAU	OB Automatch5. This segment will commence trading with an opening auction followed by continuous auto match trading. Off book reporting (manual trades) must be reported through the Millennium system.
	OBBA	OB Buyback Auction. This segment is subject to ad hoc buyback auctions. Both the Dutch and American Auction Models will be supported. Access rights to these instruments will be defined on a per instrument basis. Only the central bank and primary dealers will have access.
	OBIA	OB Issuing Auctions. This segment is subject to ad hoc issuing auctions. Both the Dutch and American Auction Models will be supported. Access rights to these instruments will be defined on a per instrument basis.
	OBOC	OB Call. This segment will support both an opening auction and an end of day (closing) auction. For the main trading phase the segment will support order entry without continuous executions. Off book reporting (manual trades) must be reported through the Millennium system.
	OBTM	OB Telephone. This segment will support both order entry and off book trade reporting (manual trades). Automatic executions will not be supported but the participant's member ID will be disseminated along with the order details message. Off book reporting (manual trades) must be reported through the Millennium system, but are not visible to the market. At beginning of Post Close an average price and traded volume will be published for each instrument traded that day.
	OBUB	OB Unlimited Buyback Auction. This segment is subject to ad hoc buyback auctions. Both the Dutch and American Auction Models will be supported. Access rights to these instruments will be defined on a per instrument basis. The central bank and fixed income members will have access.

2. Quotation Data

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

- 2.1. Quotation Values
- 2.2. TradingStatus
- 2.3. MBL, MBO and BBO Data.

2.1. Quotation Values

The examples below shows the possible values of an instrument on the OSLO FAST market data stream:

```
InstrumentStatusL1
-- 187/755054
        BID: 0  0       *NO ORDER*
        ASK: 0  0       *NO ORDER*
        LastPrice                       float64{562.62}
        DailyHighPrice                  float64{562.63}
        DailyLowPrice                   float64{557.9}
        DailyTotalVolumeTraded          float64{1804216084}
        InternalDailyOpenTimestamp      Timestamp{2015-04-01 03:10:11:989}
        InternalDailyCloseTimestamp     Timestamp{2015-04-01 14:44:46:053}
        InternalDailyHighTimestamp      Timestamp{2015-04-01 11:05:25:839}
        InternalDailyLowTimestamp       Timestamp{2015-04-01 07:00:28:082}
        InternalPriceActivityTimestamp  Timestamp{2015-04-02 21:59:00:285}
        TradingStatus                   18=NotAvailableForTrading
        DailyOpeningPrice               float64{561.09}
        DailyClosingPrice               float64{562.62}
        PreviousDailyTotalVolumeTraded  float64{3266903847}
        PreviousDailyClosingPrice       float64{561.59}
        PreviousBusinessDay             Timestamp{2015-03-31}
        CurrentBusinessDay              Timestamp{2015-04-01}
        PriceActivityMarketTimestamp    Timestamp{2015-04-02 21:59:00:285}
        InternalDailyBusinessDayTimestamp       Timestamp{2015-04-01 03:10:11:989}
```

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 OSLO FAST 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 5 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
	15	New Price Indication
	17	Ready to Trade
	18	Not Available for Trading
	21	Pre-Open

2.3. MBL, MBO and BBO Data*

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

3. Official Closing Price

The closing price is the last trade price upon close, as provided by the exchange. If the instrument has an auction phase, the market sends the last auction price, which becomes the closing price. When a stock splits, the closing price is adjusted after the closing. There is no settlement price.

4. 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.

* The MBL, MBO and BBO 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.