S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

BVMF (EQUITIES & DERIVATIVES) – Feed Update

Reference n°: 19207 – 20290 – 20140513 – Update 02

Effective as of: 02 June 2014*

Action required from users: MANDATORY ACTION

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, this date may differ. For the actual day when the changes to your custom feed handler take effect, please contact your QuantFEED® project manager.

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 19207 – 20290 – 20140513 – Update 02
May 14, 2014

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UPDATE OF THE BVMF (EQUITIES & DERIVATIVES) MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the BVMF market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of QuantFEED®.

This developer's notice contains late-breaking information about the implementation of this modification in your applications, which may not be included otherwise in the published documentation. The topics this notice covers include:

1. Upgrade Summary

Table 1 Current upgrade summary

Notice Reference	19207 – 20290 – 20140513 – Update 02
Exchanges	BVMF (EQUITIES)
Concerned MICs	BVMF
Internal Source ID	185
Effective Date	**2014-06-02***
Impact	• Update of the Referential Tags • Update of the OPEN Kinematics
Action required	MANDATORY ACTION

2. Functional Description

Effective Monday, **June 02*, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the referential data and changes the OPEN Kinematics to accommodate the new information disseminated on the BVMF market data stream, as detailed below:

* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, this date may differ. For the actual day when the changes to your custom feed handler take effect, please contact your QuantFEED® project manager.

- 2.1. Changes to the Referential Data
- 2.2. Update of the OPEN Kinematics.

2.1. Changes to the Referential Data

S&P Capital IQ Real-Time Solutions **updates** the values disseminated by referential tags below to accommodate the information broadcast on the BVMF market data stream:

Table 2 Referential tags added on the BVMF market data stream

Tag Name	Numeric ID	Type
`CFICode (for BVMF EQUITIES only)`	461	String
`LocalCodeStr`	9500	String

Below is an example of the current implementation of the updated referential tags (in `blue`):

```
instr # 496/41939 = 1040229331
    PriceCurrency                string{BRL}
    Symbol                       string{OIBR3SL}
    Description                  string{SECLOAN OI          ON      N1}
    SecurityType                 string{CS}
    FOSMarketId                  BVMF
    CFICode                      string{EMXXXX}
    SecuritySubType              string{Security Loan}
    LotType                      uint8{2}
    SecurityGroup                string{54}
    InternalCreationDate         Timestamp{2014-04-23 08:54:57:983}
    InternalModificationDate     Timestamp{2014-04-23 08:54:57:983}
    InternalSourceId             uint16{99}
    LocalCodeStr                 string{E_1000016}
    UnderlyingFOSMarketId        BVMF
    UnderlyingLocalCodeStr       string{E_3806106}
    UnderlyingFOSInstrumentCode uint32{1040229330}
```

2.2. Update of the OPEN Kinematics

In the OPEN kinematics before 2014-06-02, the opening signal was sent when the market sent the OPEN message or after the first trade of an instrument, as shown 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  05:33:07:555 1040437519  PreviousDailySettlementPrice=117.43
VU  09:29:20:990 1040437519  OpenInterest=12739
VU  11:55:00:026 1040437519  TradSesOpenTime=2014-03-17 12:00:00     TradingStatus=21
TE  11:59:00:418 1040437519  *       *       117.02  5@1     *       *
TE  11:59:13:837 1040437519  *       *       *       *       119     2@1
VU  12:00:00:015 1040437519  TradSesOpenTime=?       TradingStatus=17
TE  12:00:23:831 1040437519  *       *       *       *       118.44  22@1
TE  12:00:37:463 1040437519  *       *       117.25  59@1    *       *
TE  12:00:51:915 1040437519  *       *       *       *       118.4   8@1
TE  12:01:13:140 1040437519  *       *       117.5   2@1     *       *
TE  12:01:14:914 1040437519  *       *       *       *       118.3   100@1
TE  12:02:56:488 1040437519  *       *       117.65  1@1     *       *
SI  12:05:28:894 1040437519  OPEN    117.65
TE  12:05:28:894 1040437519  117.65  1       117.6   1@1     118.29  12@2    OH
Buyer=15,Seller=3,TradeID=1040
VU  12:05:28:894 1040437519  SessionVWAPPrice=117.32 DailyTotalVolumeTraded=660
TE  12:05:28:894 1040437519  117.6   1       117.55  59@1    *       *
Buyer=3,Seller=3,TradeID=1050
```

In the OPEN kinematics after 2014-06-02, the opening signal is sent when the market sends the OPEN message, after the first trade of an instrument or when the trading status of the instrument changes to `17=ReadyToTrade`, for the first time during the trading day, 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  04:29:46:181 1040437519  DailyTotalAssetTraded=103
VU  05:33:07:555 1040437519  PreviousDailySettlementPrice=117.43
VU  11:55:00:026 1040437519  TradSesOpenTime=2014-03-17 12:00:00     TradingStatus=21
TE  11:59:00:418 1040437519  *       *       117.02  5@1     *       *
TE  11:59:13:837 1040437519  *       *       *       *       119     2@1
SI  12:00:00:015 1040437519  OPEN    *
TE  12:00:00:015 1040437519  *       *       *       *       *       *       O
VU  12:00:00:015 1040437519  TradSesOpenTime=?       TradingStatus=17
TE  12:00:23:831 1040437519  *       *       *       *       118.44  22@1
TE  12:00:37:463 1040437519  *       *       117.25  59@1    *       *
TE  12:00:51:915 1040437519  *       *       *       *       118.4   8@1
TE  12:01:13:140 1040437519  *       *       117.5   2@1     *       *
TE  12:01:14:914 1040437519  *       *       *       *       118.3   100@1
TE  12:02:56:488 1040437519  *       *       117.65  1@1     *       *
TE  12:05:28:894 1040437519  117.65  1       117.6   1@1     118.29  12@2    H
Buyer=15,Seller=3,TradeID=1040
VU  12:05:28:894 1040437519  SessionVWAPPrice=117.32 DailyTotalVolumeTraded=660
TE  12:05:28:894 1040437519  117.6   1       117.55  59@1    *       *
Buyer=3,Seller=3,TradeID=1050
```

3. QuantFEED® Technical Implementation

The following sections describe the technical implementation of the new or updated tags:

- 3.1. CFICode (for BVMF EQUITIES only)
- 3.2. LocalCodeStr.

3.1. CFICode (for BVMF EQUITIES only)

The values of the referential tag **CFI Code** conveyed on the BVMF market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the standardized identification code of an instrument.

QuantFEED® implementation of the new values available for the tag `CFICode` is described in the table below:

Table 3 CFICode – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`CFICode`	QuantFEED® tag name.
Numeric ID	`461`	QuantFEED® 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	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the standardized identification code of an instrument.
Possible Values	`EMXXXR`	Equities - Others - Registered
	`EMXXXX`	Equities - Others
	`EPNEFR`	Equities - Preferred shares - Non-voting - Extendible - Fixed rate Income - Registered
	`ESVUFR`	Equities - Shares - Voting - Free - Fully paid - Registered
	`EUOMSR`	Equities - Units - Open-end - Mixed funds - Securities - Registered
	`MRIXXX`	Other - Referential instruments - Indices
	`OCAICS`	Options - Call options - American - Indices - Cash - Standardized
	`OCAMCS`	Options - Call options - American - Others - Cash - Standardized
	`OCASCS`	Options - Call options - American - Stock equities - Cash - Standardized
	`OCASPS`	Options - Call options - American - Stock equities - Physical - Standardized
	`OCEICS`	Options - Call options - European - Indices - Cash - Standardized
	`OCESPS`	Options - Call options - European - Stock equities - Physical - Standardized
	`OPEICS`	Options - Put options - European - Indices - Cash - Standardized
	`OPESPS`	Options - Put options - European - Stock equities - Physical - Standardized
	`RSPXXR`	Rights - Subscription rights - Preferred shares - Registered
	`RSSXXE`	Rights - Subscription rights - Ordinary shares - Exchange

The following table shows the `SecurityType` – `CFICode` combinations before and after the 2014-06-02:

Table 4 SecurityType – CFICode possible combinations on BVMF market data stream

Security Type – CFI Code before 2014-06-02	Security Type – CFI Code after 2014-06-02
`CS ESXXXX`	`CS EMXXXR`
`CS ESXXXX`	`CS EMXXXX`
`CS ESXXXX`	`CS EPNEFR`
`CS ESXXXX`	`CS ESVUFR`
`CS ESXXXX`	`CS EUOMSR`
`CS ESXXXX`	`NONE MRIXXX`
`NONE MXIXXX`	`NONE MRIXXX`
`CS ESXXXX`	`NONE RSPXXR`
`CS ESXXXX`	`NONE RSSXXE`
`OPT OCAOXX`	`OPT OCAICS`
`OPT OCAXXX`	`OPT OCAICS`
`OPT OCAOXX`	`OPT OCAMCS`
`OPT OCAOXX`	`OPT OCASCS`
`OPT OCAXXX`	`OPT OCASPS`
`OPT OCEXXX`	`OPT OCEICS`
`OPT OCEXXX`	`OPT OCESPS`
`OPT OPEXXX`	`OPT OPEICS`
`OPT OPEXXX`	`OPT OPESPS`

3.2. LocalCodeStr

The values of the referential tag **Local Code Str** conveyed on the BVMF market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the security local code.

QuantFEED® implementation of the values currently available for the tag `LocalCodeStr` is described in the table below:

Table 5 LocalCodeStr – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`LocalCodeStr`	QuantFEED® tag name.
Numeric ID	`9500`	QuantFEED® 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	`D_`*`[String]`*	Derivatives format.
	`E_`*`[String]`*	Equities format.
Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the security local code, based on the MarketID of the messages from the BVMF market data stream.

Caution	Although the `LocalCodeStr` changes, the `FOSMarketId` and the Instrument Internal Code remain the same.

4. Finding the Latest Information

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

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