S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

SGX EQUITIES & SGX DERIVATIVES – Feeds Update

Reference n°: 18500 – 19987 – 20140523

Effective as of: 09 June 2014

Action required from users: Attention Required (Optional)

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 18500 – 19987 – 20140523
May 28, 2014

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UPDATE OF THE SGX EQUITIES & SGX DERIVATIVES MARKET DATA STREAMS

To reflect the changes caused by the dissemination of new values on the SGX EQUITIES & SGX DERIVATIVES market data streams, 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. Update Summary

Table 1 Current update summary

Notice Reference	18500 – 19987 – 20140523
Exchanges	SGX EQUITIES & SGX DERIVATIVES
Concerned MICs	XSES & XSIM
Internal Source ID	221 & 159
Effective Date	**2014-06-09**
Impact	• Update of the Referential Tags • Update of the Quotation Tags
Action required	**Attention Required (Optional)**

2. Functional Description

Effective Monday, **June 09, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the referential and quotation data to accommodate the new information disseminated on the SGX EQUITIES & SGX DERIVATIVES market data streams, as described below:

- 2.4. Changes to the Quotation Data on the SGX DERIVATIVES.

2.1. Changes to the Referential Data on the SGX EQUITIES

S&P Capital IQ Real-Time Solutions **introduces** the referential tag below to accommodate the information broadcast on the SGX EQUITIES market data stream:

Table 2 Referential tags added on the SGX EQUITIES market data stream

Tag Name	Numeric ID	Type
`OperatingMIC (SGX EQUITIES)`	9533	String

Below is an example of the current implementation of the newly added (in `green`) referential tags:

```
instr # 226/1008242 = 474964594
    PriceCurrency                string{SGD}
    Symbol                       string{SU9W_RY}
    Description                  string{NBMEC15}
    SecurityType                 string{WAR}
    FOSMarketId                  XSES
    CFICode                      string{RWXXCX}
    RoundLot                     float64{1}
    InternalCreationDate         Timestamp{2013-08-08 00:00:48:192}
    InternalModificationDate     Timestamp{2014-05-23 00:00:49:025}
    InternalSourceId             uint16{221}
    InternalMagic                string{88-1-16-0-30465-0-0}
    LocalCodeStr                 string{SU9W_RY}
    ISIN                         string{SG9UA9995637}
    PriceIncrement_dynamic_TableId  uint32{14484592}
    OperatingMIC                 string{XSES}
```

2.2. Changes to the Referential Data on the SGX DERIVATIVES

S&P Capital IQ Real-Time Solutions **introduces** the referential tag below to accommodate the information broadcast on the SGX DERIVATIVES market data stream:

Table 3 Referential tags added on the SGX DERIVATIVES market data stream

Tag Name	Numeric ID	Type
`OperatingMIC (SGX DERIVATIVES)`	9533	String
`SegmentMIC (SGX DERIVATIVES)`	9534	String

Below is an example of the current implementation of the newly added (in `green`) referential tags:

```
instr # 227/1039508 = 477093012
    PriceCurrency               string{USD}
    Symbol                      string{INK14_C7700}
    Description                 string{SGX CNX NIFTY INDEX}
    SecurityType                string{OPT}
    StrikePrice                 float64{77}
    FOSMarketId                 XSIM
    CFICode                     string{OCEICX}
    RoundLot                    float64{2}
    InternalCreationDate        Timestamp{2014-03-07 10:45:05:085}
    InternalModificationDate    Timestamp{2014-03-19 22:13:51:630}
    InternalSourceId            uint16{159}
    InternalMagic               string{83-158-65-0-207-12989-7700}
    LocalCodeStr                string{INK14_C7700}
    PriceIncrement_static       float64{0.1}
    MaturityYear                uint16{2014}
    MaturityMonth               uint8{5}
    MaturityDay                 uint8{29}
    OperatingMIC                string{XSES}
    SegmentMIC                  string{XSIM}
```

2.3. Changes to the Quotation Data on the SGX EQUITIES

S&P Capital IQ Real-Time Solutions **introduces** the quotation tag below to accommodate the information broadcast on the SGX EQUITIES market data stream:

Table 4 Quotation tags added on the SGX EQUITIES market data stream

Tag Name	Numeric ID	Type
InternalDailyClosingPriceType (SGX EQUITIES)	9155	Char

Below is an example of the current implementation of the newly added (in green) quotation tags:

```
InstrumentStatusL1
-- 226/1008242
        BID: 0.067      1500000
        ASK: 0.068      1500000
        LastPrice                       float64{0.075}
        LastTradeQty                    float64{10000}
        DailyTotalVolumeTraded          float64{0}
        DailyTotalAssetTraded           float64{0}
        LastTradePrice                  float64{0.075}
        LastTradeTimestamp              Timestamp{2014-07-14 07:00:33:675}
        InternalDailyOpenTimestamp      Timestamp{2014-07-15 01:00:00:037}
        InternalDailyCloseTimestamp     Timestamp{2014-07-15 09:06:00:009}
        InternalDailyHighTimestamp      Timestamp{2014-07-14 07:00:33:675}
        InternalDailyLowTimestamp       Timestamp{2014-07-14 07:00:33:675}
        InternalPriceActivityTimestamp  Timestamp{2014-07-15 08:16:40:653}
        TradingStatus                   18=NotAvailableForTrading
        PreviousDailyTotalVolumeTraded  float64{10000}
        PreviousDailyTotalAssetTraded   float64{750}
        PreviousDailyClosingPrice       float64{0.075}
        PreviousBusinessDay             Timestamp{2014-07-14}
        CurrentBusinessDay              Timestamp{2014-07-15}
        LastAuctionVolume               float64{0}
        InternalDailyClosingPriceType   char{a}
        LastAuctionImbalanceSide        char{O}
        LastAuctionImbalanceVolume      float64{0}
        InternalLastAuctionTimestamp    Timestamp{2014-07-14 09:00:11:266}
        PriceActivityMarketTimestamp    Timestamp{2014-07-15 08:16:40:653}
        MARKET_OMNET_OMX_TradingStateName  string{CLOSE_}
```

2.4. Changes to the Quotation Data on the SGX DERIVATIVES

S&P Capital IQ Real-Time Solutions **introduces** the quotation tag below to accommodate the information broadcast on the SGX DERIVATIVES market data stream:

Table 5 Quotation tags added on the SGX DERIVATIVES market data stream

Tag Name	Numeric ID	Type
`OpenInterest (SGX DERIVATIVES)`	9150	Float64
`SettlementPriceDate (SGX DERIVATIVES)`	9380	Timestamp

Below is an example of the current implementation of the newly added (in `green`) quotation tags:

```
InstrumentStatusL1
-- 227/1039508
        BID: 1.1        0       *NO ORDER*
        ASK: 6.3        0       *NO ORDER*
        InternalDailyOpenTimestamp      Timestamp{2014-07-23 01:00:00:055}
        InternalDailyCloseTimestamp     Timestamp{2014-07-22 18:35:00:047}
        InternalPriceActivityTimestamp  Timestamp{2014-07-23 09:59:02:363}
        SettlPriceType                  uint8{2}
        TradingStatus                   17=ReadyToTrade
        TradingSessionId                int8{2}
        SessionTotalOffBookAssetTraded  float64{0}
        SessionTotalOffBookVolumeTraded float64{0}
        SessionTotalVolumeTraded        float64{0}
        SessionTotalAssetTraded         float64{0}
        DailySettlementPrice            float64{2.5}
        PreviousBusinessDay             Timestamp{2014-07-22}
        CurrentBusinessDay              Timestamp{2014-07-23}
        PreviousDailySettlementPrice    float64{1.5}
        OpenInterest                    float64{7}
        PriceActivityMarketTimestamp    Timestamp{2014-05-23 09:59:02:364}
        InternalDailyBusinessDayTimestamp   Timestamp{2014-07-23 01:00:00:055}
        SettlementPriceDate             Timestamp{2014-07-22 08:00:00:000}
        MARKET_OMNET_OMX_TradingStateName       string{OPEN_M}
```

3. QuantFEED® Technical Implementation

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

- 3.1. OperatingMIC (SGX EQUITIES)
- 3.2. OperatingMIC (SGX DERIVATIVES)
- 3.3. SegmentMIC (SGX DERIVATIVES)
- 3.4. InternalDailyClosingPriceType (SGX EQUITIES)
- 3.5. OpenInterest (SGX DERIVATIVES)
- 3.6. SettlementPriceDate (SGX DERIVATIVES).

3.1. OperatingMIC (SGX EQUITIES)

The values of the referential tag **OperatingMIC** conveyed on the SGX EQUITIES market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the parent MIC.

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

Table 6 OperatingMIC – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OperatingMIC`	QuantFEED® tag name.
Numeric ID	`9533`	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***, specifying the parent MIC.
Possible Values	`XSES`	Parent MIC for all SGX DERIVATIVES branches.

3.2. OperatingMIC (SGX DERIVATIVES)

The values of the referential tag **OperatingMIC** conveyed on the SGX DERIVATIVES market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the parent MIC.

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

Table 7 OperatingMIC – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OperatingMIC`	QuantFEED® tag name.
Numeric ID	`9533`	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***, specifying the parent MIC.
Possible Values	`XSES`	Parent MIC for all SGX DERIVATIVES branches.

3.3. SegmentMIC (SGX DERIVATIVES)

The values of the referential tag **SegmentMIC** conveyed on the SGX DERIVATIVES market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the child MIC.

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

Table 8 SegmentMIC – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SegmentMIC`	QuantFEED® tag name.
Numeric ID	9534	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***, specifying the child MIC.
Possible Values	`XSIM`	Child MIC for all SGX DERIVATIVES branches.

3.4. InternalDailyClosingPriceType (SGX EQUITIES)

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the SGX EQUITIES market data stream are disseminated via QuantFEED® 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.

QuantFEED® implementation of the values currently available for the tag `InternalDailyClosingPriceType` is described in the table below (currently disseminated values are in `green`):

Table 9 InternalDailyClosingPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`InternalDailyClosingPriceType`	QuantFEED® tag name.
Numeric ID	9155	QuantFEED® 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 9 InternalDailyClosingPriceType – technical implementation in QuantFEED® (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).

3.5. OpenInterest (SGX DERIVATIVES)

The values of the quotation tag **Open Interest** conveyed on the SGX DERIVATIVES market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the amount of derivative contracts that have not been settled in the immediately previous time period for a specific underlying security:

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

Table 10 OpenInterest – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OpenInterest`	QuantFEED® tag name.
Numeric ID	`9150`	QuantFEED® unique ID disseminated on 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 amount of derivative contracts that have not been settled in the immediately previous time period for a specific underlying security.

3.6. SettlementPriceDate (SGX DERIVATIVES)

The values of the quotation tag **SettlementPriceDate** conveyed on the SGX DERIVATIVES market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the date of the settlement 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.

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

Table 11 SettlementPriceDate – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SettlementPriceDate`	QuantFEED® tag name.
Numeric ID	`9380`	QuantFEED® unique ID disseminated on 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***, indicating the date of the settlement price.

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.