



S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

BURSA MALAYSIA EQUITIES

Reference n°: 20150803 - 22860 - 28152 - 28153

S&P Capital IQ Real-Time Solutions FeedOS™ Feed Description: BURSA MALAYSIA EQUITIES Reference 20150803 – 22860 – 28152 – 28153 August 06, 2015

France

52 Rue de la Victoire 75009 Paris France

Tel: +33 (0) 1 73 02 32 11

United States

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

United Kingdom

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

www.spcapitaliq.com

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

Singapore

12 Marina Boulevard #23-01 Marina Bay Financial Centre Tower 3 Singapore 018982

Tel: +65 6530 6546

Copyright © 2015 by Standard & Poor's Financial Services LLC, a part of McGraw Hill Financial.

All rights reserved. S&P CAPITAL IQ is a trademark of Standard & Poor's Financial Services LLC. STANDARD & POOR'S, S&P, GLOBAL CREDIT PORTAL and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P's opinions and analyses do not address the suitability of any security. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

TABLE OF CONTENTS

| FeedOS™ BURSA MALAYSIA EQUITIES Feed Description | .1 |
|--|----|
| 1. Referential Data | .1 |
| 1.1. Available Markets and Branches | .1 |
| 1.1.1. Markets | .1 |
| 1.1.2. Branches | .2 |
| 1.2. Types of Instruments | |
| 1.2.1. Bonds | .3 |
| 1.2.2. Equities | |
| 1.2.3. Index | |
| 1.2.4. Warrant | |
| 1.3. Specific Referential Tags | |
| 1.3.1. OperatingMIC | .5 |
| 2. Quotation Data | .6 |
| 2.1. Quotation Values | .7 |
| 2.2. TradingStatus | .7 |
| 2.3. Specific Quotation Tags | .8 |
| 2.3.1. Other Values | .8 |
| 2.3.1.1. Internal Daily Closing Price Type | |
| 2.4. MBL and MBO Data | .9 |
| 3. Closing Price | .9 |
| 4. Multi-Session Kinematics | 10 |
| 5. Finding the Latest Information | 10 |



FEEDOS™ BURSA MALAYSIA EQUITIES FEED DESCRIPTION

As part of the S&P Capital IQ Real-Time Solutions FeedOS™ documentation, this feed description provides you with details about the types of data disseminated on the BURSA MALAYSIA EQUITIES 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. Multi-Session Kinematics
- 5. Finding the Latest Information.

1. Referential Data

The following sections describe the characteristics of the referential data on the BURSA MALAYSIA EQUITIES market data stream, in terms of:

- 1.1. Available Markets and Branches
- 1.2. Types of Instruments
- 1.3. Specific Referential Tags.

1.1. Available Markets and Branches

This section details the list of Markets and Branches available on the BURSA MALAYSIA EQUITIES market data stream.

1.1.1. Markets

The BURSA MALAYSIA EQUITIES market data stream disseminates informations about the following markets:

Table 1 List of markets available on the BURSA MALAYSIA EQUITIES market data stream

| FeedOS Market ID | Market |
|------------------|----------------|
| XKLS | Bursa Malaysia |

The following example shows the complete list of markets available on the BURSA MALAYSIA EQUITIES market data stream and their IDs, returned by the dumps command:

1.1.2. Branches

The example below shows the complete list of branches available on the BURSA MALAYSIA EQUITIES market data stream for each market, returned by the dumps command. Each branch displays the following details: FOSMarketID, SecurityType, CFICode and Quantity (of instruments):

1.2. Types of Instruments

The following sections describe the instruments available on the BURSA MALAYSIA EQUITIES market data stream, according to their type:

- 1.2.1. Bonds
- 1.2.2. Equities
- 1.2.3. Index
- 1.2.4. Warrant.

1.2.1. Bonds

The sample below illustrates the details of a bond:

```
instr # 168/1005915 = 353327451
   PriceCurrency
                                string{MYR}
   Symbol
                                string{DIN040000223}
   Issuer
                                string{0400}
   Description
                                string{DANAINFRA NASIONAL-ETBS 4%0223}
   SecurityType
                                string{GO}
   FOSMarketId
                                XKLS
                                float64{4}
   CouponRate
                                Timestamp{2013-02-08}
   IssueDate
   CFICode
                                string{DBXXXX}
   RoundLot
                                float64{1}
   MinTradeVol
                                float64{10}
   SecuritySubType
                                string{NM}
   MaxTradeVol
                                float64{50000}
                                string{BOND}
   SecurityGroup
   ProductComplex
                                string{0060}
   MarketSegmentID
                                string{NM}
                                Timestamp{2014-09-16 23:00:06:144}
   InternalCreationDate
   InternalModificationDate
                                Timestamp{2015-01-08 09:16:58:037}
   InternalSourceId
                                uint16{251}
   InternalAggregationId
                                uint16{251}
   InternalEntitlementId
                                int32{1161}
   DelayedFeedMin
                                uint16{15}
   LocalCodeStr
                                string{0400GA_NM}
                                string{MYBVN1300711}
   ISIN
   MaturityYear
                                uint16{2023}
   MaturityMonth
                                uint8{2}
   MaturityDay
                                uint8{8}
   PriceIncrement_dynamic_TableId uint32{16449638}
   OperatingMIC
                                string{XKLS}
```

1.2.2. Equities

The sample below illustrates the details of an equity:

```
instr # 168/1006416 = 353327952
   PriceCurrency
                                string{MYR}
   Symbol 3
                                string{PBBANK}
   Issuer
                                string{1295}
                                string{PUBLIC BANK BHD}
   Description
   SecurityType
                                string{CS}
   FOSMarketId
                                XKLS
   CFTCode
                                string{ESXXXX}
   RoundLot
                                float64{1}
   MinTradeVol
                                float64{100}
   SecuritySubType
                                string{NM}
   MaxTradeVol
                                float64{500000}
   SecurityGroup
                                string{MAIN}
                                string{0010}
   ProductComplex
   MarketSegmentID
                                string{NM}
   InternalCreationDate
                                Timestamp{2014-09-16 23:00:06:550}
   InternalModificationDate
                                Timestamp{2015-08-02 23:00:04:154}
   InternalSourceId
                                uint16{251}
   InternalEntitlementId
                                int32{1161}
   LocalCodeStr
                                string{1295_NM}
   ISIN
                                string{MYL129500004}
   PriceIncrement_dynamic_TableId uint32{16449654}
   OperatingMIC
                                string{XKLS}
```

1.2.3. Index

The sample below illustrates the details of an index:

```
instr # 168/1004264 = 353325800
   PriceCurrency
                                string{MYR}
   Svmbol
                                string{FBMACE}
   Issuer
                                string{BMB}
   Description
                                string{FBM ACE}
   SecurityType
                                string{INDEX}
   FOSMarketId
                                XKLS
   CFICode
                                string{TIXXXX}
   RoundLot
                                float64{1}
   MinTradeVol
                                float64{100}
   SecuritySubType
                                string{IN}
   MarketSegmentID
                                string{IN}
   InternalCreationDate
                                Timestamp{2014-09-16 23:00:04:239}
   InternalModificationDate
                                Timestamp{2015-01-08 09:16:58:261}
   InternalSourceId
                                uint16{251}
   InternalAggregationId
                                uint16{251}
   InternalEntitlementId
                                int32{1162}
   DelayedFeedMin
                                uint16{15}
   LocalCodeStr
                                string{0871I_IN}
   ISIN
                                string{MYX087100008}
   PriceIncrement_dynamic_TableId uint32{16449638}
   OperatingMIC
                                string{XKLS}
```

1.2.4. Warrant

The sample below illustrates the details of a warrant:

```
instr # 168/1010336 = 353331872
    PriceCurrency
                                 string{MYR}
    Symbol
                                 string{CHINA50-H8}
    Issuer
                                 string{MACQ}
                                 string{CHINA50-H8: PW FTSE CHINA A50 INDEX (MACQ)}
    Description
    SecurityType
                                 string{WAR}
    StrikePrice
                                 float64{10000}
    FOSMarketId
                                 XKLS
    CFICode
                                 string{RWXXPX}
    RoundLot
                                 float64{1}
                                 float64{100}
    MinTradeVol
    SecuritySubType
                                 string{NM}
    MaxTradeVol
                                 float64{500000}
   InternalSource
                                string{STRW}
                                 string{0058}
                                 string{NM}
                                 Timestamp{2015-07-26 23:00:04:302}
                                 Timestamp{2015-08-02 23:10:01:404}
   InternalSourceId uint16{251}
InternalAggregationId uint16{251}
InternalEntitlementId int32{1161}
                                 uint16{251}
    DelayedFeedMin
                                uint16{15}
    LocalCodeStr
                                 string{0655H8_NM}
    ISIN
                                 string{MYJ0655H8Q18}
    UnderlyingLocalCodeStr string{0000FR_NM}
    MaturityYear
                                 uint16{2016}
    MaturityMonth
                                 uint8{1}
    MaturityDay
                                 uint8{28}
    PriceIncrement_dynamic_TableId uint32{16449654}
    OperatingMIC
                                 string{XKLS}
```

1.3. Specific Referential Tags

The following sections describe the specific referential tags available on the BURSA MALAYSIA EQUITIES market data stream:

• 1.3.1. OperatingMIC

1.3.1. OperatingMIC

The values of the referential tag **OperatingMIC** conveyed on the BURSA MALAYSIA EQUITIES 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 2 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 | XKLS | Parent MIC for all branches of the BURSA MALAYSIA. |

2. Quotation Data

The sections below describe the characteristics of the quotation data on the BURSA MALAYSIA EQUITIES 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 BURSA MALAYSIA EQUITIES market data stream:

```
InstrumentStatusL1
-- 168/1006416
       BID: 19.04
                        797000 @4
       ASK: 19.06
                        623800 @4
       LastPrice
                                        float64{19.06}
       LastTradeQty
                                        float64{3600}
                                        float64{19.18}
       DailyHighPrice
       DailyLowPrice
                                        float64{19}
       DailyTotalVolumeTraded
                                        float64{2310900}
       DailyTotalAssetTraded
                                        float64{44014902}
       LastTradePrice
                                        float64{19.06}
       LastTradeTimestamp
                                        Timestamp{2015-08-03 08:51:20:151}
       InternalDailyOpenTimestamp
                                        Timestamp{2015-08-03 01:00:00:186}
       InternalDailyCloseTimestamp
                                        Timestamp{2015-08-03 09:00:00:149}
       InternalDailyHighTimestamp
                                        Timestamp{2015-08-03 01:08:12:121}
       InternalDailyLowTimestamp
                                        Timestamp{2015-08-03 01:00:00:223}
       InternalPriceActivityTimestamp
                                        Timestamp{2015-08-03 08:51:20:159}
       LowLimitPrice
                                        float64{13.3}
       HighLimitPrice
                                        float64{24.7}
       TradingStatus
                                        18=NotAvailableForTrading
       TradingSessionId
                                        int8{2}
        PriorSessionsTotalAssetTraded
                                        float64{11077236}
        PriorSessionsTotalVolumeTraded float64{582000}
        SessionTotalVolumeTraded
                                        float64{2310900}
        SessionVWAPPrice
                                        float64{19.047}
       SessionTotalAssetTraded
                                        float64{44014902}
        DailyOpeningPrice
                                        float64{19}
        DailyClosingPrice
                                        float64{19.06}
       PreviousDailyTotalVolumeTraded float64{8628800}
        PreviousDailyTotalAssetTraded
                                        float64{163928552}
        PreviousDailyClosingPrice
                                        float64{19}
       PreviousBusinessDay
                                        Timestamp{2015-07-31}
        CurrentBusinessDay
                                        Timestamp{2015-08-03}
       InternalDailyClosingPriceType
                                        char{a}
        PreviousInternalDailyClosingPriceType char{a}
       InternalLastAuctionTimestamp
                                        Timestamp{2015-08-03 08:49:50:217}
       InternalCrossIndicator
                                        bool{False}
       PriceActivityMarketTimestamp
                                        Timestamp{2015-08-03 08:51:20:151}
       InternalDailyBusinessDayTimestamp
                                              Timestamp{2015-08-03 01:00:00:186}
       TradingReferencePrice
                                        float64{19}
```

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 BURSA MALAYSIA EQUITIES 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 **Trading Status** is described in the table below:

Table 3 TradingStatus – technical implementation in FeedOS

| Component | Value | Description |
|------------|---------------------------|---|
| Tag Name | TradingStatus | FeedOS tag name. |
| Numeric ID | 9100 | FeedOS unique ID broadcast on 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 |
| Possible | 17 | Ready to Trade |
| Values | 18 | Not Available for Trading |
| | 20 | Unknown or Invalid |
| | 21 | Pre-Open |

2.3. Specific Quotation Tags

The following sections describe additional, specific quotation tags available on the BURSA MALAYSIA EQUITIES market data stream:

• 2.3.1. Other Values.

2.3.1. Other Values

The following subsections describe the other values available on the BURSA MALAYSIA EQUITIES market data stream:

• 2.3.1.1. InternalDailyClosingPriceType

2.3.1.1. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the BURSA MALAYSIA EQUITIES 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 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 4 Internal Daily Closing Price Type – technical implementation in FeedOS

| Component | Value | Description |
|--------------------|-------------------------------|--|
| Tag Name | InternalDailyClosingPriceType | FeedOS tag name. |
| Numeric ID | 9155 | 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 | Char | Char data type. |
| Format | [Internal Specific Value] | An <i>internal specific value</i> , detailing the type of daily closing price, as described below. |
| | 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. |
| Possible Values | 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). |
| | 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 5-level depth. There is no 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.

^{*} 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. Multi-Session Kinematics

The following diagram describes the main trading phases on the BURSA MALAYSIA EQUITIES market data stream:

Malaysia Standard Time TradingStatus = 21 08:30 PreOpen Phase TradingStatus = 17 09:00 DAILY OPEN TradingSessionId = 1 • RESET DailyOpeningPrice RESET DailyClosingPrice Morning Session • RESET DailyTotalVolumeTraded RESET SessionTotalAssetTraded • RESET SessionClosingPrice • PreviousDailyClosingPrice = DailyClosingPrice • SessionOpeningPrice • CurrentBusinessDay = next business day CurrentBusinessDay + 3 on Friday • PreviousDailyTotalVolumeTraded = DailyTotalVolumeTraded TradingStatus = 2 12:30 close LUNCH BREAK TradingStatus = 5 14:00 preopen **PreOpen** Phase 14:30 TradingStatus = 17 open • TradingSessionId = TradingSessionId+1 (=2) Afternoon • SessionOpeningPrice Session • RESET SessionClosingPrice • RESET SessionOpeningPrice • If the instrument didn't open during the night session, update the CurrentBusinessDay with the daily date. 16:45 preclose TradingStatus = 18 17:00 DAILY DailyClosingPrice CLOSE • DailyTotalVolumeTraded SessionClosingPrice

Figure 1 Example of tags update mechanism on the BURSA MALAYSIA EQUITIES market data stream

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.