S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

ADH – Feed Update

Reference n°: 20150223 – 21888 – 25489 (UPDATE 01 TO 20150113 – 21888 – 24041)

Effective as of: 09 March 2015*

Action required from users: MANDATORY ACTION

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

* 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
FeedOS™ Developer's Notice: ADH – Feed Update
Reference 20150223 – 21888 – 25489
February 23, 2015

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UPDATE OF THE ADH MARKET DATA STREAM

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

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	20150223 – 21888 – 25489[i] (UPDATE 01 TO 20150113 – 21888 – 24041)
Exchanges	ADH
Concerned MICs	XWBO, XBUD
Internal Source ID	28, 230, 231, 232, 233, 234
Effective Date	**2015-03-09***
Impact	• Update of the Referential Tags • Update of the Quotation Tags • Update of the Level1 Market Data Kinematics
Action required	**MANDATORY ACTION** - see sections: • 2.1.12. SecurityType • 2.1.13. CFICode • 2.2.2. TradingStatus • 2.3. Update of the Level1 Market Data Kinematics – Trading Status.

i. The red bars in the left margin highlight content that has been added or changed since the previous release of this document.

2. FeedOS Technical Implementation

Effective Monday, **March 09*** **2015,** S&P Capital IQ Real-Time Solutions enhances the referential and quotation data, and updates the Level1 Market Data Kinematics to accommodate the information disseminated on the ADH market data stream, as described below:

2.1. Changes to the Referential Data

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

Table 2 Referential tags added on the ADH market data stream

Tag Name	Numeric ID	Type
SecurityGroup	1151	String
CouponRate	223	Float64
CouponPaymentDate	224	Uint32
MarketSegmentID	1300	String
MarketSegmentDesc	1396	String
MaturityYear	9512	Int16
MaturityMonth	9513	Uint8
MaturityDay	9514	Uint8
OperatingMIC	9533	String
SegmentMIC	9534	String
FaceValue	9565	Float64

Moreover, S&P Capital IQ Real-Time Solutions **updates** the referential tags below:

Table 3 Referential tags disseminating updated values on the ADH market data stream

Tag Name	Numeric ID	Type
SecurityType	167	String
CFICode	461	String

2.1.1. SecurityGroup

The values of the referential tag **Security Group** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to indicate an exchange specific name assigned to a group of related securities which may be concurrently affected by market events and actions.

* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, the date and Source IDs may differ. For the actual day when the changes to your custom feed handler will take effect, please contact your FeedOS™ project manager.

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

Table 4 SecurityGroup – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SecurityGroup`	FeedOS tag name.
Numeric ID	`1151`	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 percentile value***, indicating an exchange specific name assigned to a group of related securities which may be concurrently affected by market events and actions.

2.1.2. CouponRate

The values of the referential tag **CouponRate** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the stated percentage rate of interest for a bond, note or fixed income security.

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

Table 5 CouponRate – technical implementation in FeedOS

Component	Value	Description
Tag Name	`CouponRate`	FeedOS tag name.
Numeric ID	`223`	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 Value	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the stated percentage rate of interest for a bond, note or fixed income security.

2.1.3. CouponPaymentDate

The values of the referential tag **CouponPaymentDate** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the date when the interest for a bond, note or fixed income security is to be paid.

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

Table 6 CouponPaymentDate – technical implementation in FeedOS

Component	Value	Description
Tag Name	`CouponPaymentDate`	FeedOS tag name.
Numeric ID	`224`	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	`UInt32`	UInt32 data type.
Format / Possible Value	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the date when the interest for a bond, note or fixed income security is to be paid.

2.1.4. MarketSegmentID

The values of the referential tag **MarketSegmentID** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to detail the ID of the market segment.

FeedOS implementation of the values currently available for the tag `MarketSegmentID` is described below:

Table 7 MarketSegmentID – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MarketSegmentID`	FeedOS tag name.
Numeric ID	`1300`	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 ID of the market segment.

2.1.5. MarketSegmentDesc

The values of the referential tag **MarketSegmentDesc** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to describe the market segment.

FeedOS implementation of the values currently available for tag `MarketSegmentDesc` is described below:

Table 8 MarketSegmentDesc – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MarketSegmentDesc`	FeedOS tag name.
Numeric ID	`1396`	FeedOS 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 / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, describing the market segment.

2.1.6. MaturityYear

The values of the referential tag **MaturityYear** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the year on which the principal is required to be repaid.

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

Table 9 MaturityYear – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MaturityYear`	FeedOS tag name.
Numeric ID	`9512`	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	`Int16`	Int16 data type.
Format / Possible Value	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the year on which the principal is required to be repaid.

2.1.7. MaturityMonth

The values of the referential tag **MaturityMonth** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the month on which the principal is required to be repaid.

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

Table 10 MaturityMonth – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MaturityMonth`	FeedOS tag name.
Numeric ID	`9513`	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	`UInt8`	UInt8 data type.
Format / Possible Value	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the month on which the principal is required to be repaid.

2.1.8. MaturityDay

The values of the referential tag **MaturityDay** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the day on which the principal is required to be repaid.

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

Table 11 MaturityDay – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MaturityDay`	FeedOS tag name.
Numeric ID	`9514`	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	`UInt8`	UInt8 data type.
Format / Possible Value	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the day on which the principal is required to be repaid.

2.1.9. OperatingMIC

The values of the referential tag **OperatingMIC** conveyed on the ADH 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 12 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.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the parent MIC.

Table 12 OperatingMIC – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	XBUD	Budapest
	XLJU	Ljubljana Stock Exchange
	XPRA	Prague Cash and Index Market
	XWBO	Vienna

2.1.10. SegmentMIC

The values of the referential tag **SegmentMIC** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the child MIC.

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

Table 13 SegmentMIC – technical implementation in FeedOS

Component	Value	Description
Tag Name	SegmentMIC	FeedOS tag name.
Numeric ID	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 data type.
Format	*[Exchange Specific Value]*	An ***exchange specific value***, specifying the child MIC.
Possible Values	XVIE	Vienna

2.1.11. FaceValue

The values of the referential tag **FaceValue** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the amount of money stated on the face of a note, bond or stock.

FeedOS implementation of the tag `FaceValue` is detailed in the table below:

Table 14 Description – technical implementation in FeedOS

Component	Value	Description
Tag Name	FaceValue	FeedOS tag name.
Numeric ID	9565	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*** specifying the amount of money stated on the face of a note, bond or stock.

2.1.12. SecurityType

The values of the referential tag **Security Type** conveyed on the ADH market data stream are disseminated via FeedOS data stream in *Referential* to specify the type of security.

FeedOS implementation of the tag `SecurityType` is described in the table below (existing values are in `black`, newly added values are in `green`):

Table 15 SecurityType – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SecurityType`	FeedOS tag name.
Numeric ID	`167`	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 type of security.
Possible Values	**`CS`**	Common Stocks
	`ETF`	Exchange-Traded Funds
	`FUT`	Futures
	`GO`	General Obligations
	`INDEX`	Index
	`MF`	Mutual Funds
	`NONE`	None
	`OPT`	Options
	`PS`	Preferred Stocks
	`WAR`	Warrants

2.1.13. CFICode

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

FeedOS implementation of the tag `CFICode` is described in the table below (existing values are in `black`, newly added values are in `green`, removed values are in ~~`crossed-out red`~~):

Table 16 CFICode – technical implementation in FeedOS

Component	Value	Description
Tag Name	`CFICode`	FeedOS tag name.
Numeric ID	`461`	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 standardized identification code of an instrument.
Possible Values	**`DBFGFR`**	Debts - Bonds - Fixed Rate - Guaranteed - Fixed Maturity - Registered
	`DBFSCB`	Debts - Bonds - Fixed Rate - Secured - Fixed Maturity with Put - Bearer
	`DBFSDB`	Debts - Bonds - Fixed Rate - Secured - Fixed Maturity with Call - Bearer
	`DBFSFB`	Debts - Bonds - Fixed Rate - Secured - Fixed Maturity - Bearer
	`DBFSGB`	Debts - Bonds - Fixed Rate - Secured - Fixed Maturity with Call - Bearer

Table 16 CFICode – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	DBFTAB	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Amortization Plan - Bearer
	DBFTBB	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Amortization Plan with Call - Bearer
	DBFTFB	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DBFTFR	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Fixed Maturity - Registered
	DBFTGB	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Fixed Maturity with Call - Bearer
	DBFTTB	Debts - Bonds - Fixed Rate - Government/Treasury Guaranteed - Amortization Plan with Put - Bearer
	DBFUAB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Amortization Plan - Bearer
	DBFUBB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Amortization Plan with Call - Bearer
	DBFUCB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity with Put - Bearer
	DBFUFB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DBFUFR	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity - Registered
	DBFUGB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity with Call - Bearer
	DBFUGR	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity with Call - Registered
	DBFUQB	Debts - Bonds - Fixed Rate - Unsecured/Unguaranteed - Perpetual with Call - Bearer
	DBVGFB	Debts - Bonds - Variable - Guaranteed - Fixed Maturity - Bearer
	DBVGQB	Debts - Bonds - Variable - Guaranteed - Perpetual with Call - Bearer
	DBVSCB	Debts - Bonds - Variable - Secured - Fixed Maturity with Put - Bearer
	DBVSFB	Debts - Bonds - Variable - Guaranteed - Fixed Maturity - Bearer
	DBVSGB	Debts - Bonds - Variable - Guaranteed - Fixed Maturity with Call - Bearer
	DBVTAB	Debts - Bonds - Variable - Government/Treasury Guaranteed - Amortization Plan - Bearer
	DBVTAR	Debts - Bonds - Variable - Government/Treasury Guaranteed - Amortization Plan - Registered
	DBVTBB	Debts - Bonds - Variable - Government/Treasury Guaranteed - Amortization Plan with Call - Bearer
	DBVTFB	Debts - Bonds - Variable - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DBVTGB	Debts - Bonds - Variable - Government/Treasury Guaranteed - Fixed Maturity with Call - Bearer
	DBVTLB	Debts - Bonds - Variable - Government/Treasury Guaranteed - Amortization Plan with Put and Call - Bearer

Table 16 CFICode – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	DBVUAB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Amortization Plan - Bearer
	DBVUBB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Amortization Plan with Call - Bearer
	DBVUCB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity with Put - Bearer
	DBVUFB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DBVUGB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity with Call - Bearer
	DBVUGR	Debts - Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity with Call - Registered
	DBVUQB	Debts - Bonds - Variable - Unsecured/Unguaranteed - Perpetual with Call - Bearer
	DBVUQR	Debts - Bonds - Variable - Unsecured/Unguaranteed - Perpetual with Call - Registered
	DBXUFB	Debts - Bonds - Undefined - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DBXXXX	Debts - Bonds
	DBZSFB	Debts - Bonds - Zero Rate - Secured - Fixed Maturity - Bearer
	DBZSGB	Debts - Bonds - Zero Rate - Secured - Fixed Maturity with Call - Bearer
	DBZTFB	Debts - Bonds - Zero Rate - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DBZTGB	Debts - Bonds - Zero Rate - Government/Treasury Guaranteed - Fixed Maturity with Call - Bearer
	DBZUAB	Debts - Bonds - Zero Rate - Unsecured/Unguaranteed - Amortization Plan - Bearer
	DBZUDB	Debts - Bonds - Zero Rate - Unsecured/Unguaranteed - Fixed Maturity with Put and Call - Bearer
	DBZUFB	Debts - Bonds - Zero Rate - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DBZUGB	Debts - Bonds - Zero Rate - Unsecured/Unguaranteed - Fixed Maturity with Call - Bearer
	DBZUQB	Debts - Bonds - Zero Rate - Unsecured/Unguaranteed - Perpetual with Call - Bearer
	DCFGAB	Debts - Convertible Bonds - Fixed Rate - Guaranteed - Amortization Plan - Bearer
	DCFGFB	Debts - Convertible Bonds - Fixed Rate - Guaranteed - Fixed Maturity - Bearer
	DCFGGB	Debts - Convertible Bonds - Fixed Rate - Guaranteed - Fixed Maturity with Call - Bearer
	DCFTFB	Debts - Convertible Bonds - Fixed Rate - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DCFTGB	Debts - Convertible Bonds - Fixed Rate - Government/Treasury Guaranteed - Fixed Maturity with Call - Bearer
	DCFUCB	Debts - Convertible Bonds - Fixed Rate - Unsecured/ Unguaranteed - Fixed Maturity with Put - Bearer

Table 16 CFICode – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	DCFUDB	Debts - Convertible Bonds - Fixed Rate - Unsecured/ Unguaranteed - Fixed Maturity with Put and Call - Bearer
	DCFUFB	Debts - Convertible Bonds - Fixed Rate - Unsecured/ Unguaranteed - Fixed Maturity - Bearer
	DCFUGB	Debts - Convertible Bonds - Fixed Rate - Unsecured/ Unguaranteed - Fixed Maturity with Call - Bearer
	DCVGFB	Debts - Convertible Bonds - Variable - Guaranteed - Fixed Maturity - Bearer
	DCVGGB	Debts - Convertible Bonds - Variable - Guaranteed - Fixed Maturity with Call - Bearer
	DCVSFB	Debts - Convertible Bonds - Variable - Secured - Fixed Maturity - Bearer
	DCVTFB	Debts - Convertible Bonds - Variable - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DCVUFB	Debts - Convertible Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DCVUGB	Debts - Convertible Bonds - Variable - Unsecured/Unguaranteed - Fixed Maturity with Call - Bearer
	DCXXXX	Debts - Convertible Bonds
	DCZUQB	Debts - Convertible Bonds - Zero Rate - Unsecured/ Unguaranteed - Perpetual with Call - Bearer
	DMFUFB	Debts - Others - Fixed Rate - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DMVUFB	Debts - Others - Variable - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DMXXXX	Debts - Others
	DMZUFB	Debts - Others - Zero Rate - Unsecured/Unguaranteed - Fixed Maturity - Bearer
	DMZUQB	Debts - Others - Zero Rate - Unsecured/Unguaranteed - Perpetual with Call - Bearer
	DTFUGB	Debts - Medium-Terms Notes - Fixed Rate - Unsecured/ Unguaranteed - Fixed Maturity with Call - Bearer
	DTVTFB	Debts - Medium-Terms Notes - Variable - Government/Treasury Guaranteed - Fixed Maturity - Bearer
	DTVUFB	Debts - Medium-Terms Notes - Variable - Unsecured/ Unguaranteed - Fixed Maturity - Bearer
	DTVUGB	Debts - Medium-Terms Notes - Variable - Unsecured/ Unguaranteed - Fixed Maturity with Call - Bearer
	DTXXXX	Debts - Medium-Terms Notes
	DWXXXX	Debts - Bonds with Warrants Attached
	DYXXXX	Debts - Money Market Instruments
	EMXXXB	Equities - Others - Bearer
	EMXXXR	Equities - Others - Registered
	EPNUFB	Equities - Preferred Shares - Non-Voting - Free - Fixed Rate Income - Bearer
	EPNUXB	Equities - Preferred Shares - Non-Voting - Free - Bearer
	EPXXXX	Equities - Preferred Shares

Table 16 CFICode – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	ESVTFR	Equities - Shares - Voting - Redeemable/Extendible - Fixed Rate Income - registered
	ESVUFB	Equities - Shares - Voting - Free - Fully Paid - Bearer
	ESVUFR	Equities - Shares - Voting - Free - Fully Paid - Registered
	ESVUFZ	Equities - Shares - Voting - Free - Fully Paid - Bearer Depository Receipt
	ESVXOR	Equities - Shares - Voting - Undefined -
	ESXXXX	Equities - Shares
	EUOISB	Equities - Units - Open-End - Income Funds - Securities - Bearer
	EUXXXB	Equities - Units - Bearer
	EUXXXX	Equities - Units
	EXXXXX	Equities
	FXXXXX	Futures
	MRIXXX	Other - Referential Instruments - Indices
	MRTXXX	Other - Referential Instruments
	MXXXXX	Other
	OXAXXX	Options - American
	OXEXXX	Options - European
	RSXXXB	Rights - Subscription Rights - Bearer
	RWCNCB	Rights - Warrants - Currencies - Naked Warrants - Call - Bearer
	RWCNPB	Rights - Warrants - Currencies - Naked Warrants - Put - Bearer
	RWINCB	Rights - Warrants - Indices - Naked Warrants - Call - Bearer
	RWINPB	Rights - Warrants - Indices - Naked Warrants - Put - Bearer
	RWMNCB	Rights - Warrants - Other - Naked Warrants - Call - Bearer
	RWSNCB	Rights - Warrants - Stock-Equities - Naked Warrants - Call - Bearer
	RWSNPB	Rights - Warrants - Stock-Equities - Naked Warrants - Put - Bearer
	RWSTCB	Rights - Warrants - Stock-Equities - Traditional Warrants - Call - Bearer
	RWSTPB	Rights - Warrants - Stock-Equities - Traditional Warrants - Put - Bearer
	RWTNCB	Rights - Warrants - Commodities - Naked Warrants - Call - Bearer
	RWTNPB	Rights - Warrants - Commodities - Naked Warrants - Put - Bearer
	RWXXXX	Rights - Warrants
	TIXXXX	Referential Instruments - Indices

The example below shows the possible combinations of `SecurityTypes` and `CFICodes`, before and after the migration day (please note that additional combinations may be available, as the exchange could introduce new instruments):

BEFORE 2015-03-09	AFTER 2015-03-09
{ XWBO GO DBFSCB }	{ XWBO CS EMXXXB }
{ XWBO GO DBFSDB }	{ XWBO CS EMXXXR }
{ XWBO GO DBFSFB }	{ XWBO CS ESVTFR }
{ XWBO GO DBFSGB }	{ XWBO CS ESVUFB }
{ XWBO GO DBFTAB }	{ XWBO CS ESVUFZ }
{ XWBO GO DBFTBB }	{ XWBO CS ESVXOR }
{ XWBO GO DBFTFB }	{ XWBO CS ESXXXX }
{ XWBO GO DBFTGB }	{ XWBO CS EXXXXX }
{ XWBO GO DBFTTB }	{ XWBO ETF EUXXXX }
{ XWBO GO DBFUAB }	{ XWBO GO DBFSCB }
{ XWBO GO DBFUBB }	{ XWBO GO DBFSDB }
{ XWBO GO DBFUCB }	{ XWBO GO DBFSFB }
{ XWBO GO DBFUFB }	{ XWBO GO DBFSGB }
{ XWBO GO DBFUGB }	{ XWBO GO DBFTAB }
{ XWBO GO DBFUGR }	{ XWBO GO DBFTBB }
{ XWBO GO DBFUQB }	{ XWBO GO DBFTFB }
{ XWBO GO DBVGFB }	{ XWBO GO DBFTGB }
{ XWBO GO DBVGQB }	{ XWBO GO DBFTTB }
{ XWBO GO DBVSCB }	{ XWBO GO DBFUAB }
{ XWBO GO DBVSFB }	{ XWBO GO DBFUBB }
{ XWBO GO DBVSGB }	{ XWBO GO DBFUCB }
{ XWBO GO DBVTAB }	{ XWBO GO DBFUFB }
{ XWBO GO DBVTBB }	{ XWBO GO DBFUGB }
{ XWBO GO DBVTFB }	{ XWBO GO DBFUGR }
{ XWBO GO DBVTGB }	{ XWBO GO DBFUQB }
{ XWBO GO DBVTLB }	{ XWBO GO DBVGFB }
{ XWBO GO DBVUAB }	{ XWBO GO DBVGQB }
{ XWBO GO DBVUBB }	{ XWBO GO DBVSCB }
{ XWBO GO DBVUCB }	{ XWBO GO DBVSFB }
{ XWBO GO DBVUFB }	{ XWBO GO DBVSGB }
{ XWBO GO DBVUGB }	{ XWBO GO DBVTAB }
{ XWBO GO DBVUQB }	{ XWBO GO DBVTBB }
{ XWBO GO DBVUQR }	{ XWBO GO DBVTFB }
{ XWBO GO DBXUFB }	{ XWBO GO DBVTGB }
{ XWBO GO DBXXXX }	{ XWBO GO DBVTLB }
{ XWBO GO DBZSFB }	{ XWBO GO DBVUAB }
{ XWBO GO DBZSGB }	{ XWBO GO DBVUBB }
{ XWBO GO DBZTFB }	{ XWBO GO DBVUCB }
{ XWBO GO DBZTGB }	{ XWBO GO DBVUFB }
{ XWBO GO DBZUAB }	{ XWBO GO DBVUGB }
{ XWBO GO DBZUDB }	{ XWBO GO DBVUQB }
{ XWBO GO DBZUFB }	{ XWBO GO DBVUQR }
{ XWBO GO DBZUGB }	{ XWBO GO DBXUFB }
{ XWBO GO DCFGAB }	{ XWBO GO DBXXXX }
{ XWBO GO DCFGFB }	{ XWBO GO DBZSFB }
{ XWBO GO DCFGGB }	{ XWBO GO DBZSGB }
{ XWBO GO DCFTFB }	{ XWBO GO DBZTFB }
{ XWBO GO DCFTGB }	{ XWBO GO DBZTGB }
{ XWBO GO DCFUCB }	{ XWBO GO DBZUAB }
{ XWBO GO DCFUDB }	{ XWBO GO DBZUDB }
{ XWBO GO DCFUFB }	{ XWBO GO DBZUFB }
{ XWBO GO DCFUGB }	{ XWBO GO DBZUGB }
{ XWBO GO DCVGFB }	{ XWBO GO DBZUQB }
{ XWBO GO DCVGGB }	{ XWBO GO DCFGAB } (see next page)

BEFORE 2015-03-09

```
{ XWBO GO   DCVSFB }
{ XWBO GO   DCVTFB }
{ XWBO GO   DCVUFB }
{ XWBO GO   DCVUGB }
{ XWBO GO   DCXXXX }
{ XWBO GO   DCZUQB }
{ XWBO GO   DMXXXX }
{ XWBO GO   DTFUGB }
{ XWBO GO   DTVTFB }
{ XWBO GO   DTVUFB }
{ XWBO GO   DTVUGB }
{ XWBO GO   DTXXXX }
{ XWBO GO   DWXXXX }
{ XWBO GO   DYXXXX }
{ XWBO GO   EMXXXB }
{ XWBO NONE EMXXXB }
{ XWBO NONE EMXXXR }
{ XWBO NONE EPNUFB }
{ XWBO NONE EPNUXB }
{ XWBO NONE EPXXXX }
{ XWBO NONE ESVTFR }
{ XWBO NONE ESVUFB }
{ XWBO NONE ESVUFZ }
{ XWBO NONE ESVXOR }
{ XWBO NONE ESXXXX }
{ XWBO NONE EUOISB }
{ XWBO NONE EUXXXB }
{ XWBO NONE EUXXXX }
{ XWBO NONE EXXXXX }
{ XWBO NONE MRIXXX }
{ XWBO NONE RSXXXB }
{ XBUD ETF  EUXXXX }
{ XBUD FUT  FXXXXX }
{ XBUD GO   DBXXXX }
{ XBUD NONE DBXXXX }
{ XBUD NONE EXXXXX }
{ XBUD NONE MRIXXX }
{ XBUD NONE MRTXXX }
{ XBUD OPT  OXAXXX }
{ XBUD OPT  OXEXXX }
```

AFTER 2015-03-09

```
{ XWBO GO   DCFGFB }
{ XWBO GO   DCFGGB }
{ XWBO GO   DCFTFB }
{ XWBO GO   DCFTGB }
{ XWBO GO   DCFUCB }
{ XWBO GO   DCFUDB }
{ XWBO GO   DCFUFB }
{ XWBO GO   DCFUGB }
{ XWBO GO   DCVGFB }
{ XWBO GO   DCVGGB }
{ XWBO GO   DCVSFB }
{ XWBO GO   DCVTFB }
{ XWBO GO   DCVUFB }
{ XWBO GO   DCVUGB }
{ XWBO GO   DCXXXX }
{ XWBO GO   DCZUQB }
{ XWBO GO   DMFUFB }
{ XWBO GO   DMVUFB }
{ XWBO GO   DMXXXX }
{ XWBO GO   DMZUFB }
{ XWBO GO   DMZUQB }
{ XWBO GO   DTFUGB }
{ XWBO GO   DTVTFB }
{ XWBO GO   DTVUFB }
{ XWBO GO   DTVUGB }
{ XWBO GO   DTXXXX }
{ XWBO GO   DWXXXX }
{ XWBO GO   DYXXXX }
{ XWBO GO   EMXXXB }
{ XWBO MF   EUOISB }
{ XWBO MF   EUXXXB }
{ XWBO MF   EUXXXX }
{ XWBO NONE DBXXXX }
{ XWBO NONE ESVUFB }
{ XWBO NONE ESVUFZ }
{ XWBO NONE ESXXXX }
{ XWBO NONE EUXXXB }
{ XWBO NONE MRIXXX }
{ XWBO NONE RSXXXB }
{ XWBO PS   EPNUFB }
{ XWBO PS   EPNUXB }
{ XWBO PS   EPXXXX }
{ XWBO WAR  RWCNCB }
{ XWBO WAR  RWCNPB }
{ XWBO WAR  RWINCB }
{ XWBO WAR  RWINPB }
{ XWBO WAR  RWMNCB }
{ XWBO WAR  RWSNCB }
{ XWBO WAR  RWSNPB }
{ XWBO WAR  RWSTCB }
{ XWBO WAR  RWSTPB }
{ XWBO WAR  RWTNCB }
{ XWBO WAR  RWTNPB }
{ XWBO WAR  RWXXXX }
{ XBUD CS   EXXXXX            (see next page)
```

BEFORE 2015-03-09	AFTER 2015-03-09
	{ XBUD CS MXXXXX }
	{ XBUD ETF EUXXXX }
	{ XBUD FUT FXXXXX }
	{ XBUD GO DBXXXX }
	{ XBUD NONE DBXXXX }
	{ XBUD NONE EXXXXX }
	{ XBUD NONE FXXXXX }
	{ XBUD NONE MRIXXX }
	{ XBUD NONE MRTXXX }
	{ XBUD OPT OXAXXX }
	{ XBUD OPT OXEXXX }
	{ XPRA CS EXXXXX }
	{ XPRA GO DBXXXX }
	{ XPRA NONE DBXXXX }
	{ XPRA NONE MRIXXX }
	{ XPRA NONE TIXXXX }
	{ XLJU CS ESVUFB }
	{ XLJU CS ESVUFR }
	{ XLJU GO DBFGFR }
	{ XLJU GO DBFTFR }
	{ XLJU GO DBFUAB }
	{ XLJU GO DBFUFR }
	{ XLJU GO DBVTAR }
	{ XLJU GO DBVUGR }
	{ XLJU NONE MRIXXX } (see next page)

Referential Data Sample

Below is an example showing the current implementation of the newly added (in green) and updated (in blue) referential tags:

```
instr # 25/12970 = 52441770
    PriceCurrency               string{EUR}
    Symbol                      string{AT0000A0XJ64}
    Issuer                      string{81607}
    Description                 string{JP Immo.I 3\,5% bes.Anl. 12-22}
    SecurityType                string{GO}
    FOSMarketId                 XWBO
    CouponRate                  float64{3.5}
    CouponPaymentDate           uint32{20151221}
    PriceType                   uint8{1}
    CFICode                     string{DBFSCB}
    RoundLot                    float64{100000}
    SecuritySubType             string{bond}
    SecurityGroup               string{OLD}
    MarketSegmentID             string{C2CORP}
    MarketSegmentDesc           string{corporate standard sector}
    InternalCreationDate        Timestamp{2014-03-24 07:45:28:949}
    InternalModificationDate    Timestamp{2015-03-13 05:00:26:478}
    InternalSourceId            uint16{28}
    InternalEntitlementId       VIR
    LocalCodeStr                string{8_XVIE_AT0000A0XJ64}
    ISIN                        string{AT0000A0XJ64}
    PriceIncrement_static       float64{0.01}
    MaturityYear                uint16{2022}
    MaturityMonth               uint8{12}
    MaturityDay                 uint8{21}
    OperatingMIC                string{XWBO}
    SegmentMIC                  string{XVIE}
    FaceValue                   float64{100000}
```

2.2. Changes to the Quotation Data

S&P Capital IQ Real-Time Solutions **introduces** the quotation tags below to accommodate the information disseminated on the ADH market data stream:

Table 17 Quotation tags added on the ADH market data stream

Tag Name	Numeric ID	Type
InternalDailyClosingPriceType	9155	Char

Moreover, S&P Capital IQ Real-Time Solutions **updates** the quotation tags below:

Table 18 Quotation tags disseminating updated values on the ADH market data stream

Tag Name	Numeric ID	Type
TradingStatus	9100	Enum

2.2.1. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the ADH 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 (the values disseminated as of 2015-03-09 are highlighted in `green`):

Table 19 InternalDailyClosingPriceType – technical implementation in QuantFEED®

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, as described below.
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).

2.2.2. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the ADH 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 highlighted in `green`):

Table 20 TradingStatus – technical implementation in QuantFEED®

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

Quotation Data Sample

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

```
InstrumentStatusL1
-- 112/30125
        BID: 22975      1500    @1
        ASK: 23051      400     @1
        LastPrice                       float64{23000}
        LastTradeQty                    float64{10}
        DailyHighPrice                  float64{23000}
        DailyLowPrice                   float64{22719}
        DailyTotalVolumeTraded          float64{49}
        DailyTotalAssetTraded           float64{1116041}
        LastTradePrice                  float64{23000}
        LastTradeTimestamp              Timestamp{2015-05-14 08:51:26:240}
        InternalDailyOpenTimestamp      Timestamp{2015-05-14 08:00:21:697}
        InternalDailyCloseTimestamp     Timestamp{2015-05-13 16:20:04:265}
        InternalDailyHighTimestamp      Timestamp{2015-05-14 08:51:26:326}
        InternalDailyLowTimestamp       Timestamp{2015-05-14 08:21:33:706}
        InternalPriceActivityTimestamp  Timestamp{2015-05-14 10:33:55:555}
        TradingStatus                   15=NewPriceIndication
        DailyOpeningPrice               float64{22719}
        PreviousDailyClosingPrice       float64{22506}
        PreviousBusinessDay             Timestamp{2015-05-13}
        CurrentBusinessDay              Timestamp{2015-05-14}
        InternalDailyClosingPriceType   char{a}
        PriceActivityMarketTimestamp    Timestamp{2015-05-14 10:33:55:240}
        MARKET_ADH_OrderbookStateCode   string{6}
```

2.3. Update of the Level1 Market Data Kinematics – Trading Status

In the Level1 Market Data Kinematics **before 2015-03-09**, when the tag `MARKET_ADH_OrderbookStateCode` received the value `1004=Between Auction`, the Trading Status remained unchanged, 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           null   234882357   DailyClosingPrice=11080 InternalDailyClosingPriceType=a
VU   10:10:03:410   234882357   MARKET_ADH_OrderbookStateCode=32        TradingStatus=18
VU   10:15:02:890   234882357   MARKET_ADH_OrderbookStateCode=2 TradingStatus=21
VU   09:30:01:420   234882357   MARKET_ADH_OrderbookStateCode=1001
VU   09:30:01:420   234882357   MARKET_ADH_OrderbookStateCode=1008
TE   09:30:01:420   234882357   *       *       10800   37@2    11080   1@1
VU   10:00:29:260   234882357   MARKET_ADH_OrderbookStateCode=1004
TE   10:00:29:260   234882357   *       *       !       0       !       0
VU   10:00:00:540   234882357   MARKET_ADH_OrderbookStateCode=1002      TradingStatus=5
VU   10:00:00:540   234882357   MARKET_ADH_OrderbookStateCode=1011
TE   10:00:00:540   234882357   *       *       10800   37@2    11080   1@1
```

In the Level1 Market Data Kinematics **after 2015-03-09**, when the tag `MARKET_ADH_OrderbookStateCode` will receive the value `1004=Between Auction`, the Trading Status will change to `15=NewPriceIndication`, 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           null   234911520   DailyClosingPrice=11080 InternalDailyClosingPriceType=a
VU   10:10:03:410   234911520   MARKET_ADH_OrderbookStateCode=32        TradingStatus=18
VU   10:15:02:890   234911520   MARKET_ADH_OrderbookStateCode=2 TradingStatus=21
VU   09:30:01:420   234911520   MARKET_ADH_OrderbookStateCode=1001
VU   09:30:01:420   234911520   MARKET_ADH_OrderbookStateCode=1008
TE   09:30:01:420   234911520   *       *       10800   37@2    11080   1@1
VU   10:00:29:260   234911520   MARKET_ADH_OrderbookStateCode=1004      TradingStatus=15
TE   10:00:29:260   234911520   *       *       !       0       !       0
SI   10:00:00:540   234911520   OPEN    *
TE   10:00:00:540   234911520   *       *       *       *       *       *       O
VU   10:00:00:540   234911520   MARKET_ADH_OrderbookStateCode=1002      TradingStatus=5
VU   10:00:00:540   234911520   MARKET_ADH_OrderbookStateCode=1011
TE   10:00:00:540   234911520   *       *       10800   37@2    11080   1@1
```

3. 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.