S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

LIFFE Migration to ICE LIFFE

Reference n°: 20141001 – 21906 – 23021 (UPDATE 03 TO 20141001 – 21906 – 23021)

Effective as of: 06 October 2014*

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 (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 20141001 – 21906 – 23021
October 02, 2014

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MIGRATION OF THE LIFFE MARKET DATA STREAM TO THE ICE LIFFE MARKET DATA STREAM

To reflect the changes caused by the progressive migration of the LIFFE market data stream to the ICE LIFFE market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of QuantFEED®.

The table *Progressive ICE LIFFE migration milestones* describing the product migration in the previous releases of the notice has been replaced by a separate document that you should receive with the current developer's notice update.

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

1. Update Summary

Table 1 Current update summary

Notice Reference	20141001 – 21906 – 23021[i] (UPDATE 03 TO 20140918 – 21906 – 22858)
Exchanges	LIFFE
Concerned MICs	XLIF
Internal Source ID	163, 172, 177, 178
Effective Date	**2014-10-06***
Impact	• Update of the Referential Tags • Update of the Quotation Tags
Action required	**MANDATORY ACTION** – see sections 2.1.16. CFICode.

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

2. QuantFEED® Technical Implementation

Effective Monday, **October 06*** **2014,** S&P Capital IQ Real-Time Solutions enhances the referential and quotation data to accommodate the new information disseminated on the ICE LIFFE 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 ICE LIFFE market data stream:

Table 2 Referential tags added on the ICE LIFFE market data stream

Tag Name	Numeric ID	Type
PriceCurrency	15	String
MinTradeVol	562	Flot64
ProductComplex	1227	String
UnderlyingFOSInstrumentCode	9511	UInt32
OperatingMIC	9533	String
SegmentMIC	9534	String
MARKET_ICE_ContractSymbol	11600	String
MARKET_ICE_OffExchangeIncrementQty	11601	Float64
MARKET_ICE_OffExchangeIncrementPrice	11602	Float64
MARKET_ICE_SerialUnderlyingLocalCodeStr	11603	String

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

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

Tag Name	Numeric ID	Type
Description	107	String
SecurityType	167	String
StdMaturity	200	String
Factor	228	Float64
ContractMultiplier	231	Float64
CFICode	461	String
SecuritySubType	762	String
UnderlyingFOSMarketId	9509	UInt16
UnderlyingLocalCodeStr	9510	String

* 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 also **removes** the referential tags below:

Table 4 Referential tags no longer disseminated on the ICE LIFFE market data stream

Tag Name	Numeric ID	Type
MARKET_LIFFE_XDP_StrikePriceDenominator	11700	UInt32
MARKET_LIFFE_XDP_StrikePriceDecimalLocator	11701	UInt16
MARKET_LIFFE_XDP_InstrumentDenominator	11702	UInt32

2.1.1. PriceCurrency

The values of the referential tag **PriceCurrency** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the currency of the price.

QuantFEED® implementation of the tag `PriceCurrency` is described in the table below:

Table 5 PriceCurrency – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	PriceCurrency	QuantFEED® tag name.
Numeric ID	15	QuantFEED® 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 currency of the price.
Possible Values	CAD	Canadian Dollar
	CHF	Swiss Franc
	CZK	Czech Koruna
	DKK	Danish Krone
	EUR	Euro
	GBP	British Pound
	HUF	Hungarian Forint
	NOK	Norwegian Krone
	PLN	Polish Zloty
	SEK	Swedish Krona
	TRY	Turkish Lira
	USD	United States Dollar
	USX	United States Cent
	ZAR	South African Rand

2.1.2. MinTradeVol

The values of the referential tag **MinTradeVol** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the minimum traded volume.

QuantFEED® implementation of the tag `MinTradeVol` is detailed in the table below:

Table 6 MinTradeVol – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MinTradeVol`	QuantFEED® tag name.
Numeric ID	`562`	QuantFEED® 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`	String data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the minimum traded volume.

2.1.3. ProductComplex

The values of the referential tag **ProductComplex** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to detail the type of product.

QuantFEED® implementation of the tag `ProductComplex` is detailed in the table below:

Table 7 ProductComplex – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`ProductComplex`	QuantFEED® tag name.
Numeric ID	`1227`	QuantFEED® 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.

Table 7 ProductComplex – technical implementation in QuantFEED® (Continued)

Component	Value		Description
Format	**Future**	[Symbol+Maturity+"F"]	Symbol – 6 bytes, security symbol Maturity – YYYYMMDD "F" – 1 byte **Example:** AFR 20171229F
	Future Spread	[Side+Ratio+Symbol+Maturity+Type]	Side – 1 byte, buy (+), sell (-) Ratio – 2 bytes Symbol – 6 bytes Maturity – YYYYMMDD Type – 1 byte The format applies for each leg. **Example:** +01H 20140926F -01H 20141229F
	Option	[Symbol+Maturity+Type+Strike]	Symbol – 6 bytes Maturity – YYYYMMDD Type – 1 byte, Call (C), Put (P) Strike – 8 bytes **Example:** ESX 141219C06500000
	Future MLEG	[Side+Ratio+Symbol+Maturity+Type]	Side – 1 byte, buy (+), sell (-) Ratio – 2 bytes Symbol – 6 bytes Maturity – YYYYMMDD Type – 1 byte The format applies for each leg. **Example:** +01I 20140915F -02I 20141013F +01I 20141117F
	Option MLEG	[Side+Ratio+Leg's Product Complex]	Side – 1 byte, buy (+), sell (-) Ratio – 2 bytes Leg's Product Complex – 21 bytes The format applies for each leg. **Example:** +01VOD 140919C00203000 +01VOD 140919P00203000
Possible Values	*[Exchange Specific Value]*		An ***exchange specific value***, detailing the type of product.

2.1.4. UnderlyingFOSInstrumentCode

The values of the referential tag **UnderlyingFOSInstrumentCode** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to detail the ISIN of the underlying instrument.

QuantFEED® implementation of the tag `UnderlyingFOSInstrumentCode` is detailed in the table below:

Table 8 UnderlyingFOSInstrumentCode – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`UnderlyingFOSInstrumentCode`	QuantFEED® tag name.
Numeric ID	`9511`	QuantFEED® 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 Values	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the ISIN of the underlying instrument.

2.1.5. OperatingMIC

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

QuantFEED® implementation of the tag `OperatingMIC` is described in the table below:

Table 9 OperatingMIC – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OperatingMIC`	QuantFEED® tag name.
Numeric ID	`9533`	QuantFEED® 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.
Possible Values	`IFCA`	ICE Futures Canada
	`IFEU`	ICE Futures Europe
	`IFUS`	ICE Futures US

2.1.6. SegmentMIC

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

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

Table 10 SegmentMIC – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SegmentMIC`	QuantFEED® tag name.
Numeric ID	`9534`	QuantFEED® 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	`IFLL`	ICE Futures Europe - Financial Products Division
	`IFLO`	ICE Futures Europe - Equity Products Division
	`IFLX`	ICE Futures Europe - Agricultural Products Division

2.1.7. MARKET_ICE_ContractSymbol

The values of the referential tag **MARKET_ICE_ContractSymbol** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the symbol of the contract.

QuantFEED® implementation of the tag `MARKET_ICE_ContractSymbol` is detailed in the table below:

Table 11 MARKET_ICE_ContractSymbol – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_ICE_ContractSymbol`	QuantFEED® tag name.
Numeric ID	`11600`	QuantFEED® 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 symbol of the contract.

2.1.8. MARKET_ICE_OffExchangeIncrementQty

The values of the referential tag **MARKET_ICE_OffExchangeIncrementQty** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the increment quantity of the OTC.

QuantFEED® implementation of the tag `MARKET_ICE_OffExchangeIncrementQty` is detailed in the table below:

Table 12 MARKET_ICE_OffExchangeIncrementQty – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_ICE_OffExchangeIncrementQty`	QuantFEED® tag name.
Numeric ID	`11601`	QuantFEED® 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***, specifying the increment quantity of the OTC.

2.1.9. MARKET_ICE_OffExchangeIncrementPrice

The values of the referential tag **MARKET_ICE_OffExchangeIncrementPrice** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the tick size of the OTC.

QuantFEED® implementation of the tag `MARKET_ICE_OffExchangeIncrementPrice` is detailed in the table below:

Table 13 MARKET_ICE_OffExchangeIncrementPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_ICE_OffExchangeIncrementPrice`	QuantFEED® tag name.
Numeric ID	`11602`	QuantFEED® 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***, specifying the tick size of the OTC.

2.1.10. MARKET_ICE_SerialUnderlyingLocalCodeStr

The values of the referential tag **MARKET_ICE_SerialUnderlyingLocalCodeStr** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the `LocalCodeStr` of the underlying instrument with different maturity.

QuantFEED® implementation of the tag `MARKET_ICE_OffExchangeIncrementPrice` is detailed in the table below:

Table 14 MARKET_ICE_OffExchangeIncrementPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_ICE_SerialUnderlyingLocalCodeStr`	QuantFEED® tag name.
Numeric ID	`11603`	QuantFEED® 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***, specifying the `LocalCodeStr` of the underlying instrument with different maturity.

2.1.11. Description

The values of the referential tag **Description** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to characterize an instrument.

QuantFEED® implementation of the tag `Description` is detailed in the table below:

Table 15 Description – technical implementation in QuantFEED®

Component	Value		Description
Tag Name	`Description`		QuantFEED® tag name.
Numeric ID	`107`		QuantFEED® 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	**Future**	`Retrieved from the description provided by the exchange`	**Example:** `Richards Bay Coal Futures - Richards Bay - Dec17`
	Future Spread	`Retrieved from the description provided by the exchange`	**Example:** `UK Natural Gas Spr - NBP - Q1 15/Q2 15`

Table 15 Description – technical implementation in QuantFEED® (Continued)

Component	Value		Description
Format	Option	"Option on" + the description provided by the exchange	**Example:** Option on Cocoa Futures - NYCC - Dec14
	Future MLEG	[Side+Ratio+Symbol+Maturity+Type]	Side – 1 byte, buy (+), sell (-) Ratio – 2 bytes Symbol – 6 bytes Maturity – YYYYMMDD Type – 1 byte The format applies for each leg. **Example:** +01I 20140915F -02I 20141013F +01I 20141117F
	Option MLEG	[Side+Ratio+Leg's Product Complex]	Side – 1 byte, buy (+), sell (-) Ratio – 2 bytes Leg's Product Complex – 21 bytes, OSI Standard, v. 1.8 The format applies for each leg. **Example:** +01VOD 140919C00203000 +01VOD 140919P00203000
Possible Values	*[Exchange Specific Value]*		An ***exchange specific value***, characterizing the instrument.

2.1.12. SecurityType

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

QuantFEED® implementation of the tag SecurityType is described in the table below:

Table 16 SecurityType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	SecurityType	QuantFEED® tag name.
Numeric ID	167	QuantFEED® 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	FUT	Future
	MLEG	Multileg
	OOF	Options on Futures
	OPT	Options

2.1.13. StdMaturity

The values of the referential tag **StdMaturity** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the standard maturity of a security.

QuantFEED® implementation of the tag `StdMaturity` is described in the table below:

Table 17 StdMaturity – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`StdMaturity`	QuantFEED® tag name.
Numeric ID	`200`	QuantFEED® 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	`[YYYYMM]`	Year-Month Format
Possible values	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the standard maturity of a security.

2.1.14. Factor

The values of the referential tag **Factor** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the Contract Value Factor by which a price must be adjusted to determine the true nominal value of one futures/options contract.

QuantFEED® implementation of the tag `Factor` is described in the table below:

Table 18 Factor – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`Factor`	QuantFEED® tag name.
Numeric ID	`228`	QuantFEED® 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***, specifying the Contract Value Factor by which a price must be adjusted to determine the true nominal value of one futures/options contract.

2.1.15. ContractMultiplier

The values of the referential tag **ContractMultiplier** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the amount of underlying asset represented by each derivative contract.

QuantFEED® implementation of the `ContractMultiplier` is described in the table below:

Table 19 ContractMultiplier – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`ContractMultiplier`	QuantFEED® tag name.
Numeric ID	`231`	QuantFEED® 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`	String data type.
Format / Possible values	*`[Exchange Specific Value]`*	An ***exchange specific value***, specifying the amount of underlying asset represented by each derivative contract.

2.1.16. CFICode

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

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

Table 20 CFICode – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`CFICode`	QuantFEED® tag name.
Numeric ID	`461`	QuantFEED® 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	`FCAXXS`	Futures - Commodities Futures - Agriculture, Forestry and Fishing - Spread
	`FCAXXX`	Futures - Commodities Futures - Agriculture, Forestry and Fishing
	`FCEXXS`	Futures - Commodities Futures - Extraction Resources - Spread
	`FCEXXX`	Futures - Commodities Futures - Extraction Resources
	~~`FCXPSX`~~	Futures - Commodities Futures - Physical - Standardized
	`FFCXXM`	Futures - Financial Futures - Currencies - Other
	`FFCXXS`	Futures - Financial Futures - Currencies - Spread
	`FFCXXX`	Futures - Financial Futures - Currencies
	`FFDXXM`	Futures - Financial Futures - Debt Instruments - Other
	`FFDXXS`	Futures - Financial Futures - Debt Instruments - Spread
	`FFDXXX`	Futures - Financial Futures - Debt Instruments

Table 20 CFICode – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	FFIXXS	Futures - Financial Futures - Indices - Spread
	FFIXXX	Futures - Financial Futures - Indices
	FFMXXS	Futures - Financial Futures - Other - Spread
	FFMXXX	Futures - Financial Futures - Other
	FFNXXM	Futures - Financial Futures - Interest Rates - Other
	FFNXXS	Futures - Financial Futures - Interest Rates - Spread
	FFNXXX	Futures - Financial Futures - Interest Rates
	FFSXXX	Futures - Financial Futures - Stock Equities
	FFWXXS	Futures - Financial Futures - Swaps - Spread
	FFWXXX	Futures - Financial Futures - Swaps
	~~FFXCSX~~	Futures - Financial Futures - Cash - Standardized
	~~FFXPSX~~	Futures - Financial Futures - Physical - Standardized
	~~MRXXXX~~	Other - Referential Instruments
	MXXXXX	Other Instruments
	OCAFXX	Options - Call Options - American - Futures
	OCASXX	Options - Call Options - American - Stock Equities
	~~OCAXPS~~	Options - Call Options - American - Physical - Standardized
	OCEFXX	Options - Call Options - European - Futures
	OCEIXX	Options - Call Options - European - Indices
	OCESXX	Options - Call Options - European - Stock Equities
	~~OCEXCS~~	Options - Call Options - European - Cash - Standardized
	~~OCEXPS~~	Options - Call Options - European - Physical - Standardized
	OCXSXX	Options - Call Options - Stock Equities
	~~OCXXXX~~	Options - Call Options
	OMXXXX	Options - Other
	OPAFXX	Options - Put Options - American - Futures
	OPASXX	Options - Put Options - American - Stock Equities
	~~OPAXPS~~	Options - Put Options - American - Physical - Standardized
	OPEFXX	Options - Put Options - European - Futures
	OPEIXX	Options - Put Options - European - Indices
	OPESXX	Options - Put Options - European - Stock Equities
	~~OPEXCS~~	Options - Put Options - European - Cash - Standardized
	~~OPEXPS~~	Options - Put Options - European - Physical - Standardized
	OPXSXX	Options - Put Options - Stock Equities
	~~OPXXXX~~	Options - Put Options

2.1.17. SecuritySubType

The values of the referential tag **SecuritySubType** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the subtype of a security.

QuantFEED® implementation of the tag `SecuritySubType` is described in the table below:

Table 21 SecuritySubType – technical implementation in QuantFEED®

Component	Value		Description	
Tag Name	`SecuritySubType`		QuantFEED® tag name.	
Numeric ID	`762`		QuantFEED® 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	**Future**	`"Future" + Contract Term`	`Contract Term` has one of the following values: • `Day` • `Week` • `Balance_of_Month` • `Month` • `Quarter` • `Serial` • `Season` • `Balance_of_Week` • `Calendar_Year` • `Variable` • `Custom` • `Same_Day` • `Next_Day` • `Weekly` • `Pack` • `Bundle` **Example:** `Future/Month`	
	Future Spread	`Retrieved from the description provided by the exchange.`	**FEC Display Name**	**Strategy Name**
			`BALMOSPR`	Balmo over Month
			`BLUPACK`	Pack (Blue)
			`BNDL`	Bundle (no color)
			`BNDLY10`	Bundle (10yr)
			`BNDLY2`	Bundle (2yr)
			`BNDLY3`	Bundle (3yr)
			`BNDLY4`	Bundle (4yr)
			`BNDLY5`	Bundle (5yr)
			`BNDLY6`	Bundle (6yr)
			`BNDLY7`	Bundle (7yr)
			`BNDLY8`	Bundle (8yr)
			`BNDLY9`	Bundle (9yr)
			`BOX`	Box
			`CALL`	Call
			`CALL3WAY`	3-Way: Straddle versus a Call
			`CALLCALSPR`	Call Calendar Spread
			`CALLCALX`	Hedged Call Calendar
			`CALLCALX`	Hedged Call Calendar

Table 21 SecuritySubType – technical implementation in QuantFEED® (Continued)

Component	Value		Description	
Format	Future Spread	Retrieved from the description provided by the exchange.	**FEC Display Name**	**Strategy Name**
			CALLCONDR	Call Condor
			CALLDIAGSP	Diagonal Call Spread
			CALLFLY	Call Butterfly
			CALLLADR	Call Ladder
			CALLLADRX	Hedged Call Ladder
			CALLLADRX	Hedged Call Ladder
			CALLSPR	Call Spread
			CALLSPRP	Call Spread versus Sell Put
			CALLSPRX	Hedged Call Spread
			CALLX	Hedged Call
			CALSTRD	Straddle Spread
			CALSTRDX	Hedged Straddle Spread
			CALSTRDX	Hedged Straddle Spread
			CALSTRDX	Hedged Straddle Spread
			CALSTRDX	Hedged Straddle Spread
			CCONDRX	Hedged Call Condor
			CCONDRX	Hedged Call Condor
			CDIAGX	Hedged Diagonal Call Spread
			CDIAGX	Hedged Diagonal Call Spread
			CFLYX	Hedged Call Butterlfy
			CFLYX	Hedged Call Butterlfy
			COMBOSPR	Combo Spread
			COPPACK	Pack (Copper)
			CRACK	CRACK Spread
			CSTRP	Call Strip
			CUST	Custom
			FCAL	Futures Calendar Spread
			FCONDR	Futures Condor
			FENCECALL	Fence (to the call)
			FENCECALLX	Hedged Fence (to the call)
			FENCEPUT	Fence (to the put)
			FENCEPUTX	Hedged Fence (to the put)
			FFLY	Futures Butterfly
			FSTRP	Futures Strip
			GLDPACK	Pack (Gold)
			GRNPACK	Pack (Green)
			GUT	Gut Strangle
			GUTX	Hedged Guts Strangle
			GUTX	Hedged Guts Strangle

Table 21 SecuritySubType – technical implementation in QuantFEED® (Continued)

Component	Value		Description	
Format	Future Spread	Retrieved from the description provided by the exchange.	**FEC Display Name**	**Strategy Name**
			HEATRATE	Heat Rate
			ICONDR	Iron Condor
			ICONDRX	Hedged Iron Condor
			ICONDRX	Hedged Iron Condor
			IFLY	Iron Butterfly
			IFLYX	Hedged Iron Butterfly
			IFLYX	Hedged Iron Butterfly
			JROLL	Jelly Roll
			OILCRACK	OTC Gas Oil Crack
			ORNPACK	Pack (Orange)
			PACK	Pack(no color)
			PCONDRX	Hedged Put Condor
			PCONDRX	Hedged Put Condor
			PDIAGX	Hedged Diagonal Put Spread
			PDIAGX	Hedged Diagonal Put Spread
			PFLYX	Hedged Put Butterlfy
			PFLYX	Hedged Put Butterlfy
			PLATDIFSPR	Platts Diff Spread
			PLATTSPR	Platts Spread
			PNKPACK	Pack (Pink)
			PSTRP	Put Strip
			PURPACK	Pack (Purple)
			PUT	Put
			PUT3WAY	3-Way: Straddle versus a Put
			PUTCALSPR	Put Calendar Spread
			PUTCALX	Hedged Put Calendar
			PUTCALX	Hedged Put Calendar
			PUTCONDR	Put condor
			PUTDIAGSP	Diagonal Put Spread
			PUTFLY	Put Butterfly
			PUTLADR	Put Ladder
			PUTLADRX	Hedged Put Ladder
			PUTLADRX	Hedged Put Ladder
			PUTSPR	Put Spread
			PUTSPRC	Put Spread versus Sell Call
			PUTSPRX	Hedged Put Spread
			PUTX	Hedged Put
			RATIOCSPR	1x2 Call Spread
			RATIOCSPRX	Hedged 1x2 Call Spread

Table 21 SecuritySubType – technical implementation in QuantFEED® (Continued)

Component	Value		Description	
Format	Future Spread	Retrieved from the description provided by the exchange.	**FEC Display Name**	**Strategy Name**
			RATIOCSPRX	Hedged 1x2 Call Spread
			RATIOPSPR	1x2 Put Spread
			RATIOPSPRX	Hedged 1x2 Put Spread
			RATIOPSPRX	Hedged 1x2 Put Spread
			RATIOSPR	Ratio Spread
			REDPACK	Pack (Red)
			REVCON	Reversal/Conversion
			SILPACK	Pack (Silver)
			SPR	Spread S
			SPRVSCX	Put Spread versus Sell Call + Hedge
			SPRVSPX	Call Spread versus Sell Put - Hedge
			STRADDLE	Straddle
			STRANGLE	Strangle
			STRDSTRP	Straddle Strip
			STRDX	Hedged Straddle
			STRDX	Hedged Straddle
			STRGX	Hedged Strangle
			STRGX	Hedged Strangle
			SYN	Synthetic Underlying
			VOLSPR	Volumetric Spread
			WHTPACK	Pack (White)
			Example: SPR	
	Option	"Option on Future" + Contract Term	For the possible values of the Contract Term, see **Future** entry above. **Example:** Option on Future/Month	
	Future MLEG	Retrieved from the description provided by the exchange	For the possible values of the Contract Term, see **Future Spread** entry above. **Example:** FFLY	
	Option MLEG	Retrieved from the description provided by the exchange.	For the possible values of the Contract Term, see **Future Spread** entry above. **Example:** STRADDLE	
Possible Values	*[Exchange Specific Value]*		An ***exchange specific value***, detailing the subtype of a security.	

2.1.18. UnderlyingFOSMarketId

The values of the referential tag **UnderlyingFOSMarketId** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the market identifier.

QuantFEED® implementation of the tag `UnderlyingFOSMarketId` is described in the table below:

Table 22 UnderlyingFOSMarketId – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`UnderlyingFOSMarketId`	QuantFEED® tag name.
Numeric ID	`9509`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`UInt16`	UInt16 data type.
Format	*`[Internal Specific Value]`*	An ***internal specific value***, specifying the market identifier.
Possible Values	`XLIF`	ICE LIFFE

2.1.19. UnderlyingLocalCodeStr

The values of the referential tag **UnderlyingLocalCodeStr** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the ISIN of the underlying instrument.

QuantFEED® implementation of the tag `UnderlyingLocalCodeStr` is described in the table below:

Table 23 UnderlyingLocalCodeStr – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`UnderlyingLocalCodeStr`	QuantFEED® tag name.
Numeric ID	`9510`	QuantFEED® 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 ISIN of the underlying instrument.

Referential Data Sample

Below is an example of the referential tags implementation before and after the upgrade (newly added tags are in `green`, tags disseminating updated values are in `blue`, and removed tags are in ~~`crossed-out red`~~):

Referential Data before 2014-10-06

```
instr # 293/402070 = 614867606
    PriceCurrency               string{GBP}
    Symbol                      string{VOD}
    Description                 string{Call 240 on Vodafone Group plc STND OPT}
    SecurityType                string{OPT}
    StrikePrice                 float64{240}
    FOSMarketId                 XLIF
    ContractMultiplier          float64{1000}
    CFICode                     string{OCXXXX}
    InternalCreationDate        Timestamp{2014-09-03 23:36:26:401}
    InternalModificationDate    Timestamp{2014-09-03 23:36:26:401}
    InternalSourceId            uint16{178}
    InternalAggregationId       uint16{178}
    LocalCodeStr                string{OOVOD160600240C}
    PriceIncrement_static       float64{0}
    UnderlyingFOSMarketId       XLON
    UnderlyingLocalCodeStr      string{GB00BH4HKS39}
    MaturityYear                uint16{2016}
    MaturityMonth               uint8{6}
    MARKET_LIFFE_XDP_StrikePriceDenominator     uint32{1}
    MARKET_LIFFE_XDP_StrikePriceDecimalLocator  uint16{0}
    MARKET_LIFFE_XDP_InstrumentDenominator      uint32{1000}

                                        --/--

instr # 293/402827 = 614868363
    PriceCurrency               string{CHF}
    Symbol                      string{CO5}
    Description                 string{Future 2015-03 on MEDIUM SWISS CONFEDERATION BOND
FUTURE}
    SecurityType                string{FUT}
    StdMaturity                 string{201503}
    FOSMarketId                 XLIF
    Factor                      float64{0.01}
    ContractMultiplier          float64{1}
    CFICode                     string{FFXPSX}
    DatedDate                   Timestamp{2014-09-09}
    InternalCreationDate        Timestamp{2014-09-08 23:35:18:381}
    InternalModificationDate    Timestamp{2014-09-30 23:25:27:186}
    InternalSourceId            uint16{174}
    LocalCodeStr                string{LFCO5150300000F}
    PriceIncrement_static       float64{0.01}
    MaturityYear                uint16{2015}
    MaturityMonth               uint8{3}
    MaturityDay                 uint8{6}
    MARKET_LIFFE_XDP_InstrumentDenominator      uint32{100}
```

Referential Data after 2014-10-06

```
instr # 293/402171 = 6158846206
    PriceCurrency          string{GBP}
    Symbol                 string{VOD}
    Description            string{Option on Vodafone Group Plc - STND Options - ICEU - Sep14}
    SecurityType           string{OOF}
    StrikePrice            float64{203}
    FOSMarketId            XLIF
    CFICode                string{OCAFXX}
    MinTradeVol            float64{1}
    SecuritySubType        string{Option on Future/Month}
    ProductComplex         string{VOD   140919C00203000}
    InternalCreationDate         Timestamp{2014-09-03 07:42:48:784}
    InternalModificationDate     Timestamp{2014-09-03 07:42:48:784}
    InternalEntitlementId        string{ICA}
    LocalCodeStr                 string{91248916}
    PriceIncrement_static        float64{0.25}
    UnderlyingFOSMarketId        uint32{XLIF}
    UnderlyingLocalCodeStr       string{5041635}
    UnderlyingFOSInstrumentCode  uint32{1011580198}
    MaturityYear                 uint16{2014}
    MaturityMonth                uint8{9}
    MaturityDay                  uint8{19}
    OperatingMIC                 string{IFEU}
    SegmentMIC                   string{IFLO}
    MARKET_ICE_ContractSymbol    string{VOD FMU0014_OMCA0000002030091914}
    MARKET_ICE_SerialUnderlyingLocalCodeStr  string{5041631}

                                          --/--
instr # 293/433822 = 614899358
    PriceCurrency              string{CHF}
    Symbol                     string{C05}
    Description                string{Medium Swiss Confederation Bond Future - ICEU - Mar15}
    SecurityType               string{FUT}
    StdMaturity                string{201503}
    FOSMarketId                XLIF
    Factor                     float64{1000}
    ContractMultiplier         float64{1000}
    CFICode                    string{FFDXXX}
    MinTradeVol                float64{1}
    SecuritySubType            string{Future/Month}
    ProductComplex             string{C05   20150306F}
    InternalCreationDate       Timestamp{2014-09-27 01:56:52:021}
    InternalModificationDate   Timestamp{2014-10-01 07:42:25:048}
    InternalHideFromLookup     bool{True}
    InternalSourceId           uint16{69}
    InternalEntitlementId      int32{1175}
    LocalCodeStr               string{5096624}
    PriceIncrement_static      float64{0.01}
    MaturityYear               uint16{2015}
    MaturityMonth              uint8{3}
    MaturityDay                uint8{6}
    OperatingMIC               string{IFEU}
    SegmentMIC                 string{IFLL}
    MARKET_ICE_ContractSymbol  string{C05 FMH0015!}
    MARKET_ICE_OffExchangeIncrementQty  float64{1}
    MARKET_ICE_OffExchangeIncrementPrice        float64{1}
```

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 ICE LIFFE market data stream:

Table 24 Quotation tags added on the ICE LIFFE market data stream

Tag Name	Numeric ID	Type
DailySettlementPrice	9133	Float64
OpenInterest	9150	Float64
SettlementPriceDate	9380	Timestamp
OpenInterestDate	9382	Timestamp
SettlementPriceType	9383	Char
MARKET_ICE_IntervalPriceLimitsOnHold	14503	Bool

2.2.1. DailySettlementPrice

The values of the quotation tag **DailySettlementPrice** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Other Values* to specify the value of the daily 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 tag `DailySettlementPrice` is described in the table below:

Table 25 DailySettlementPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`DailySettlementPrice`	QuantFEED® tag name.
Numeric ID	`9133`	QuantFEED® 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***, specifying the value of the daily settlement price.

2.2.2. OpenInterest

The values of the quotation tag **OpenInterest** conveyed on the ICE LIFFE 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 tag `OpenInterest` is described in the table below:

Table 26 OpenInterest – technical implementation in QuantFEED®

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

2.2.3. SettlementPriceDate

The values of the quotation tag **SettlementPriceDate** conveyed on the ICE LIFFE 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 tag `SettlementPriceDate` is described in the table below:

Table 27 SettlementPriceDate – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SettlementPriceDate`	QuantFEED® tag name.
Numeric ID	`9380`	QuantFEED® unique ID disseminated on the 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.

2.2.4. OpenInterestDate

The values of the quotation tag **OpenInterestDate** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the date of the 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 tag `OpenInterestDate` is described below:

Table 28 OpenInterestDate – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OpenInterestDate`	QuantFEED® tag name.
Numeric ID	`9382`	QuantFEED® unique ID disseminated on the 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 derivative contracts that have not been settled in the immediately previous time period for a specific underlying security.

2.2.5. SettlementPriceType

The values of the quotation tag **SettlementPriceType** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the type of 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 tag `SettlementPriceType` is described in the following table (the values disseminated as of 2014-10-06 are highlighted in `green`):

Table 29 SettlementPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SettlementPriceType`	QuantFEED® tag name.
Numeric ID	`9383`	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Char`	Timestamp data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating the type of settlement price.
Possible Values	`a`	**Official** – Explicit Official Daily Settlement Price, as distributed by the exchange.
	`b`	**Preliminary** – Settlement Price subject to change until the Official Daily Settlement Price is published.
	`z`	**Manual** – Settlement Price disseminated manually (in case of a correction).
	0	**Undefined**

2.2.6. MARKET_ICE_IntervalPriceLimitsOnHold

The values of the quotation tag **MARKET_ICE_IntervalPriceLimitsOnHold** conveyed on the ICE LIFFE market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate whether an instrument is in an IPL hold or not:

- 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 tag `MARKET_ICE_IntervalPriceLimitsOnHold` is described in the table below:

Table 30 MARKET_ICE_IntervalPriceLimitsOnHold – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_ICE_IntervalPriceLimitsOnHold`	QuantFEED® tag name.
Numeric ID	`14503`	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Bool`	Bool data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating whether an instrument is in an IPL hold or not.
Possible Values	`True`	IPL hold

Quotation Data Sample

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

```
InstrumentStatusL1
-- 293/753812
        BID: 113.47     0       *NO ORDER*
        ASK: 114        0       *NO ORDER*
        LastPrice                       float64{114}
        LastTradeQty                    float64{5}
        DailyHighPrice                  float64{114}
        DailyLowPrice                   float64{113.49}
        DailyTotalVolumeTraded          float64{202}
        DailyTotalAssetTraded           float64{22641.4}
        LastTradePrice                  float64{114}
        LastTradeTimestamp              Timestamp{2014-10-17 14:13:36:687}
        InternalDailyOpenTimestamp      Timestamp{2014-10-17 12:24:43:611}
        InternalDailyCloseTimestamp     Timestamp{2014-10-17 12:26:53:240}
        InternalPriceActivityTimestamp  Timestamp{2014-10-17 12:26:53:240}
        TradingStatus                   18=NotAvailableForTrading
        SessionVWAPPrice                float64{113.77}
        DailyOpeningPrice               float64{113.49}
        DailyClosingPrice               float64{114}
        DailySettlementPrice            float64{113.49}
        PreviousDailyTotalVolumeTraded  float64{0}
        PreviousDailyTotalAssetTraded   float64{0}
        PreviousDailyClosingPrice       float64{113.49}
        PreviousBusinessDay             Timestamp{2014-10-16}
        CurrentBusinessDay              Timestamp{2014-10-17}
        PreviousDailySettlementPrice    float64{113.49}
        OpenInterest                    float64{135}
        LastAuctionPrice                float64{113.49}
        DailyTotalOffBookVolumeTraded   float64{0}
        InternalLastAuctionTimestamp    Timestamp{2014-10-17 12:23:41:129}
        PriceActivityMarketTimestamp    Timestamp{2014-10-17 16:00:00:107}
        SettlementPriceDate             Timestamp{2014-10-17}
        OpenInterestDate                Timestamp{2014-10-17}
        SettlementPriceType             char{a}
        MARKET_ICE_IntervalPriceLimitsOnHold     bool{True}
```

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.