## **S&P Capital IQ Real-Time Solutions**

# FeedOS™ Developer's Notice

## **LIFFE XDP - Feed Update**

Reference n°: 20150219 – 14403 – 25443 (UPDATE 01 TO 20150114 – 14403 – 16439)

Effective as of: 09 March 2015\*

Action required from users: Attention Required



\* 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: LIFFE XDP - Feed Update Reference 20150219 - 14403 - 25443 February 19, 2015

#### **France Offices**

52 Rue de la Victoire 75009 Paris France

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

#### **US Offices**

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

#### **UK Office**

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

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

#### **Singapore Office**

12 Marina Boulevard #23-01 Marina Bay Financial Centre Tower 3 Singapore 018982 Tel: +65 6530 6546

www.capitaliq.com

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, indirect, 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.



To reflect the changes caused by the dissemination of new values on the LIFFE XDP 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
- 2. FeedOS Technical Implementation
- 3. Finding the Latest Information.

# 1. Update Summary

Table 1 Current update summary

Notice Reference	20150219 – 14403 – 25443 <sup>i</sup> (UPDATE 01 TO 20150114 – 14403 – 16439)
Exchanges	LIFFE XDP
Concerned MICs	XMAT, XMON, XEUI, XEUC, XEUE, XLIF, XBRD, MFOX
Internal Source ID	162, 163, 172, 174, 175, 177, 178
Effective Date	2015-03-09 <sup>*</sup>
Impact	<ul><li> Update of the Referential Tags</li><li> Update of the Quotation Tags</li><li> Update of the Quotation Context Tags</li></ul>
Action required	Attention Required

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, quotation and quotation context data to accommodate the new information disseminated on the LIFFE XDP market data stream, as described below:

- 2.1. Changes to the Referential Data
- 2.2. Changes to the Quotation Data
- 2.3. Changes to the Quotation Context Data.

# 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 LIFFE XDP market data stream:

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

Tag Name	Numeric ID	Туре
OperatingMIC	9533	String
SegmentMIC	9534	String

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

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

Tag Name	Numeric ID	Туре
InternalModificationDate	9401	Timestamp

## 2.1.1. OperatingMIC

The values of the referential tag OperatingMIC conveyed on the LIFFE XDP 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 4 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.

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.

Table 4 OperatingMIC – technical implementation in FeedOS (Continued)

Component	Value	Description
	XAMS	NYSE Euronext Amsterdam
	XBRU	NYSE Euronext Brussels
Possible Values	XLDN	NYSE Euronext London
	XLIS	NYSE Euronext Lisbon
	XPAR	NYSE Euronext Paris

### 2.1.2. SegmentMIC

The values of the referential tag **SegmentMIC** conveyed on the LIFFE XDP 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 5 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.
Туре	String	String data type.
Format	[Exchange Specific Value]	An exchange specific value, specifying the child MIC.
	MFOX	NYSE Euronext - Mercado de Futuros e Opções
	XBRD	NYSE Euronext - Euronext Brussels - Derivatives
	XEUE	Euronext EQF, Equities and Indices Derivatives
Possible Values	XEUI	Euronext IRF, Interest Rate Future and Options
	XLIF	NYSE Euronext LIFFE
	XMAT	Euronext Paris MATIF
	XMON	Euronext Paris MONEP

#### 2.1.3. InternalModificationDate

The values of the referential tag **InternalModificationDate** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS data stream in *Referential* to specify the date when the referential data of an instrument has changed internally.

FeedOS implementation of the values available for the tag Internal Modification Date is described below:

Table 6 InternalModificationDate – technical implementation in FeedOS

Component	Value	Description
Tag Name	InternalModificationDate	FeedOS tag name.
Numeric ID	9401	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	Timestamp	Timestamp data type.
Format / Possible Values	[Internal Specific Value]	An <i>internal specific value</i> , detailing the date when the referential data of an instrument has changed internally.  NOTE: After 2015-03-09, the update mechanism of the tag InternalModificationDate changes. Thus, the timestamp will no longer be updated on a daily basis, unless there is a significant change in the referential data of the instrument.

### **Referential Data Sample**

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

```
instr # 449/154958 = 941776206
   PriceCurrency
                                string{EUR}
                                string{BXF}
   Symbol 3
   Description
                                string{Future 2015-06 on BEL 20 INDEX FUTURE}
                                string{FUT}
   SecurityType
                                string{201506}
   StdMaturity
   FOSMarketId
                                XBRD
                                float64{5}
    Factor
   ContractMultiplier
                                float64{10}
   CFICode
                                string{FFXPSX}
   DatedDate
                                Timestamp{2014-12-22}
    InternalCreationDate
                                Timestamp{2014-12-22 02:45:24:165}
   InternalModificationDate
                                Timestamp{2015-03-09 03:16:54:152}
    InternalSourceId
                                uint16{178}
   InternalAggregationId
                                uint16{177}
    InternalEntitlementId
                                int32{1072}
    LocalCodeStr
                                string{FFBXF150600000F}
    PriceIncrement_static
                                float64{0.5}
    UnderlyingFOSMarketId
                                XBRU
   UnderlyingLocalCodeStr
                                string{BE0389555039}
   MaturityYear
                                uint16{2015}
    MaturityMonth
                                uint8{6}
                                uint8{19}
    MaturityDay
    OperatingMIC
                                string{XBRU}
                                string{XBRD}
    SegmentMIC
    MARKET_LIFFE_XDP_InstrumentDenominator
                                                uint32{100}
```

## 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 LIFFE XDP market data stream:

Table 7 Quotation tags added on the LIFFE XDP market data stream

Tag Name	Numeric ID	Туре
OpenInterest	9150	Float64
SettlementPriceDate	9380	Timestamp
OpenInterestDate	9382	Timestamp
SettlementPriceType	9383	Char
MARKET_LIFFE_MarketStatuses	14651	UInt32

S&P Capital IQ Real-Time Solutions also **removes** the quotation tags below:

Table 8 Quotation tags no longer disseminated on the LIFFE XDP market data stream

Tag Name	Numeric ID	Туре
MARKET_LIFFE_MarketMode	14650	String

#### 2.2.1. OpenInterest

The values of the quotation tag **OpenInterest** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS 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.

FeedOS implementation of the tag OpenInterest is described in the table below:

Table 9 OpenInterest – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	OpenInterest	FeedOS tag name.
Numeric ID	9150	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	Float64	Float64 data type.
Format / Possible Values	[Exchange Specific Value]	An <b>exchange specific value</b> , detailing the amount of derivative contracts that have not been settled in the immediately previous time period for a specific underlying security.

#### 2.2.2. SettlementPriceDate

The values of the quotation tag **SettlementPriceDate** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS 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 Levell event quotNotifTradeEventExt, for Java.

FeedOS implementation of the tag SettlementPriceDate is described in the table below:

Table 10 SettlementPriceDate – technical implementation in FeedOS

Component	Value	Description
Tag Name	SettlementPriceDate	FeedOS tag name.
Numeric ID	9380	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	Timestamp	Timestamp data type.
Format / Possible Values	[Exchange Specific Value]	An <b>exchange specific value</b> , indicating the date of the settlement price.

#### 2.2.3. OpenInterestDate

The values of the quotation tag **OpenInterestDate** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS 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 Levell event quotNotifTradeEventExt, for Java.

FeedOS implementation of tag OpenInterestDate is described below:

Table 11 OpenInterestDate – technical implementation in FeedOS

Component	Value	Description
Tag Name	OpenInterestDate	FeedOS tag name.
Numeric ID	9382	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	Timestamp	Timestamp data type.
Format / Possible Values	[Exchange Specific Value]	An <b>exchange specific value</b> , indicating the date of the derivative contracts that have not been settled in the immediately previous time period for a specific underlying security.

## 2.2.4. SettlementPriceType

The values of the quotation tag **SettlementPriceType** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS 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 Levell event quotNotifTradeEventExt, for Java.

FeedOS implementation of the tag SettlementPriceType is described in the following table (the values disseminated as of 2015-03-09 are highlighted in green):

Table 12 SettlementPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	SettlementPriceType	FeedOS tag name.
Numeric ID	9383	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	Timestamp data type.
Format	[Exchange Specific Value]	An <b>exchange specific value</b> , 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

## 2.2.5. MARKET\_LIFFE\_MarketStatuses

The values of the quotation tag **MARKET\_LIFFE\_MarketStatuses** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS data stream in *Other Values* to indicate:

- 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.

MARKET\_LIFFE\_MarketStatuses simultaneously accepts multiple values, as shown in the example below:

```
MARKET_LIFFE_MarketStatuses uint32{8918088}
```

- 881448 in Hex and
- 100010000001010001001000 in Bin

where the value 8918088 translates as:

 $\Rightarrow$  3 - Open, 6 - Price Limits Enabled, 10 - Session 2, 12 - Quote Width Exemption 1, 19 - Un-Terminate, 23 - Unhold

 $Feed OS\ implementation\ of\ the\ tag\ {\tt MARKET\_LIFFE\_MarketStatuses}\ is\ described\ in\ the\ table\ below:$ 

Table 13 MARKET\_LIFFE\_MarketStatuses – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	MARKET_LIFFE_MarketStatuses	FeedOS tag name.
Numeric ID	14651	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	UInt32	UInt32 data type.
Format	[Exchange Specific Value]	An <i>internal specific value</i> , detailing the status of the exchange. It simultaneously accepts multiple-bit values.
	0	Closed
	1	ExPit Extend Open
	2	Halted
	3	Open
	4	Pre Closed
	5	Pre Open
	6	Price Limits Enabled
	7	Price Limits Disabled
	8	Restricted Open
	9	Session 1
	10	Session 2
Possible Values	11	Session 3
Possible values	12	Quote Width Exemption 1
	13	Quote Width Exemption 2
	14	Quote Width Exemption 3
	15	Dark Series
	16	Light Series
	17	Trading Unhalt
	18	Terminate
	19	Un-Terminate
	20	Expire
	21	Pre-Expiry
	22	Hold
	23	Unhold

#### **Quotation Data Sample**

Below is an example showing the current implementation of the newly added (in green), updated (in blue) and removed (in crossed out red) quotation tags:

```
InstrumentStatusL1
-- 80/459662
       BID: 4112
                        110
       ASK: 4126.5
                        20
                                        float64{4116.5}
       LastPrice
       LastTradeQty
                                        float64{1}
       DailyHighPrice
                                        float64{4273.5}
       DailyLowPrice
                                        float64{4110}
       DailyTotalVolumeTraded
                                        float64{51}
       DailyTotalAssetTraded
                                        float64{213286.5}
       LastTradePrice
                                        float64{4116.5}
                                        Timestamp{2015-01-05 16:41:45:434}
        LastTradeTimestamp
       InternalDailyOpenTimestamp
                                        Timestamp{2015-01-05 07:00:00:004}
       InternalDailyCloseTimestamp
                                        Timestamp{2015-01-02 21:00:00:004}
       InternalDailyHighTimestamp
                                        Timestamp{2015-01-05 08:48:39:497}
       InternalDailyLowTimestamp
                                        Timestamp{2015-01-05 16:28:56:453}
       InternalPriceActivityTimestamp
                                        Timestamp{2015-01-05 17:05:12:297}
       TradingStatus
                                        17=ReadyToTrade
       DailyOpeningPrice
                                        float64{4220.5}
       DailySettlementPrice
                                        float64{4111.5}
       PreviousDailyTotalVolumeTraded float64{5}
       PreviousDailyTotalAssetTraded
                                        float64{21281.5}
       PreviousDailyClosingPrice
                                        float64{4255}
       PreviousBusinessDay
                                        Timestamp{2015-01-02}
        CurrentBusinessDay
                                        Timestamp{2015-01-05}
       PreviousDailySettlementPrice
                                        float64{4251.5}
                                        float64{19}
       OpenInterest
                                        Timestamp{2015-01-05 17:05:12:294}
       PriceActivityMarketTimestamp
                                        Timestamp{2015-01-05 16:52:34:876}
       SettlementPriceDate
       PreviousSettlementPriceDate
                                        Timestamp{2015-01-01}
       OpenInterestDate
                                        Timestamp{1970-08-22}
                                        string{32 10 7 23 42 14}
       MARKET_LIFFE_MarketMode
                                        char{b}
       SettlementPriceType
       PreviousSettlementPriceType
                                        char{a}
                                        uint32{8918088}
       MARKET_LIFFE_MarketStatuses
```

# 2.3. Changes to the Quotation Context Data

S&P Capital IQ Real-Time Solutions updates the quotation context tags below to accommodate the information disseminated on the LIFFE XDP market data stream:

Table 14 Quotation context tags disseminating updated values on the LIFFE XDP market data stream

Tag Name	Numeric ID	Туре
MARKET_LIFFE_XDP_TradeTypeIndicator	15201	String

## 2.3.1. MARKET\_LIFFE\_XDP\_TradeTypeIndicator

Each time a trade occurs, the values of the quotation context tag **MARKET\_LIFFE\_XDP\_TradeTypeIndicator** conveyed on the LIFFE XDP market data stream are disseminated via FeedOS data stream in *Context* to describes the type of trade:

- 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 MARKET\_LIFFE\_XDP\_TradeTypeIndicator is described in the table below (existing values are in black, removed values are in crossed out red):

Table 15 MARKET\_LIFFE\_XDP\_TradeTypeIndicator – technical implementation in FeedOS

Component	Value	Description
Tag Name	MARKET_LIFFE_XDP_TradeTypeIndicator	FeedOS tag name.
Numeric ID	15201	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 <i>internal specific value</i> , detailing the status of the exchange. It simultaneously accepts multiple-bit values.
	1	Best Bid
	2	Best Offer
	3	Bid
	4	Offer
	5	Total Traded Volume
	6	Conventional Trade (default value, not sent)
	7	Block Trade
	8	Basis Trade
	9	Prof Trade
	10	Guaranteed Cross Trade
	11	Against Actual Trade
	12	Asset Allocation Trade
Possible Values	13	External Match Trade
	14	Exchange For Swap Trade
	15	Exchange For Physical Trade
	29	Strategy Leg Conventional Trade
	30	Strategy Leg Block Trade
	31	Strategy Leg Basis Trade
	33	Strategy Leg Guaranteed Cross Trade
	34	Strategy Leg Against Actual Trade
	35	Strategy Leg Asset Allocation Trade
	36	Strategy Leg External Match Trade
	37	Strategy Leg Exchange For Swap Trade
	38	Strategy Leg Exchange For Physical Trade
	40	Request for Quote

#### **Quotation Context Data Sample**

Below is an example showing the current implementation of the updated (in blue) quotation tags:

```
BEFORE 2015-03-09
TE
    08:00:32:151 941695889
                                                       0.6
                                                               5
SI
    08:01:00:004 941695889
                           OPEN
    08:01:00:004 941695889
                                                                      O
    08:01:00:004 941695889
                           MARKET_LIFFE_MarketStatuses=8918090
                                                                 TradingStatus=17
ΤE
    08:03:02:442 941695889
                                        *
                                                *
                                                       0.2
                                                               10
    11:11:45:684 941695889
TE
MARKET_LIFFE_XDP_TradeTypeIndicator=40
TE 11:11:50:696 941695889
                                        0.02
                                                15
                                                       0.16
                                                               15
                                        0.02
                                                       0.15
                                                               10
TE 11:11:50:737 941695889
                                                25
TE 11:11:50:962 941695889 *
                                                       0.14
                                                               15
TE 11:12:07:716 941695889 *
                                        0.04
                                                10
TE 11:12:07:716 941695889 *
                                        0.05
                                                15
                                                               *
TE 11:12:07:749 941695889
                                                       0.14
                                                               25
AFTER 2015-03-09
                                                       0.6
                                                               5
TE 08:00:32:151 941695889
    08:01:00:004 941695889
                           OPEN
    08:01:00:004 941695889
TE
VU
   08:01:00:004 941695889
                           MARKET LIFFE MarketStatuses=8918090
                                                                TradingStatus=17
                                               *
TE 08:03:02:442 941695889
                                                       0.2
TE 11:11:50:696 941695889 *
                                        0.02
                                                15
                                                       0.16
                                                               15
TE 11:11:50:737 941695889 *
                                        0.02
                                                25
                                                       0.15
                                                               10
TE 11:11:50:962 941695889 *
                                                *
                                                       0.14
TE 11:12:07:716 941695889 *
                                        0.04
                                                10
TE 11:12:07:716 941695889 *
                                        0.05
                                                15
                                                               *
TE 11:12:07:749 941695889
                                                               25
                                                       0.14
```

# 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.