TQ501 · TECHNICAL SPECIFICATION

# Turquoise Equities Guide to Reference Data Services

ISSUE 1.9 02 July 2013

# Contents

# 1 Introduction

## 1.1 Purpose

The purpose of this document is to provide an overview of the reference data services available on the Turquoise Millennium Exchange platform.

## 1.2 Readership

This document outlines the reference data services available on Millennium Exchange.

When read in conjunction with the message specifications it is intended that the document provide all of the details for Turquoise customers to develop to the new services.

This document is particularly relevant to trading and technical staff within Turquoise's member firms, information vendors and other market participants interested in receiving Turquoise reference data.

## 1.3 Document Series

This document is part of series of documents providing a holistic view of full trading and information services available from Turquoise post the migration to Millennium Exchange.

The current series of documents are set out below:

- TQ101 – Guide to Migration
- TQ102 – Connectivity Guide
- TQ103 – Trading Technical Parameters
- TQ201 – Trading Gateway (FIX 5.0)
- TQ202 – Post Trade Gateway (FIX 5.0)
- TQ203 – Drop Copy Gateway (FIX 5.0)
- TQ301 – Trading Gateway (Native)
- TQ401 – Level-2 ITCH Market Data
- **TQ501 - Guide to Reference Data Services (this document)**
- TQ601 – Guide to Certification

## 1.4 Document History

This document has been through the follow iterations:

| Issue | Date | Description |
|---|---|---|
| 1.0 | 08 July 2010 | First issue of this document published via the Turquoise website and distributed to customers. |
| 1.1 | 03 August 2010 | Addition of FTP site details. |
| 1.2 | 13 August 2010 | Correction of Multicast ID field name.<br>Addition of Reference Price field. |
| 1.3 | 24 August 2010 | Clarification of "Access to the service" |
| 1.4 | 22 September 2010 | Addition of alternative Instrument and Price Tick files. Correction of IP address for Access to the Service |
| 1.5 | 23 September 2010 | Clarification of IP address file structure |
| 1.6 | 12 October 2010 | Alteration of Reference Price definition |
| 1.7 | 30 March 2012 | Added connectivity details for reference data via Extranex<br>Updated login credentials for FTP/SFTP sites |
| 1.8 | 25 April 2013 | Updated connectivity details for new location |
| 1.9 | 01 July 2013 | Added new target IP 194.169.9.158 |

## 1.5 Enquiries

Please contact either Market Operations or your Technical Account Manager if you have any questions about the Millennium Exchange services outlined in this document.

Market Operations can be contacted at:

- Telephone: +44 (0)20 7382 7676
- Email: market.operations@tradeturquoise.com

Technical Account Managers can be contacted at:

- Telephone: +44 (0)20 7797 3939
- Email: londontam@lseg.com

# 2. Reference Data Service

## 2.1 Calendar and Service hours

Market Reference Data files are available on published trading days. This data will be available by 06:00 a.m. UK time.

## 2.2 Access to the service

Turquoise Reference Data files can be downloaded via either File Transfer Protocol (FTP) or Secure File Transfer Protocol (SFTP). Customers can access the Turquoise FTP/SFTP servers via Extranex, Hosting, CMC as well as via the internet.

Site details are as follows:

```
IP Address:      194.169.9.44 (Extranex, Hosting, CMC) when connecting
                 from any production IPs assigned to the SAP
                 194.169.9.158 ((Extranex, Hosting, CMC) when connecting
                 from any CDS IPs assigned to the SAP
                 194.169.1.16 (Internet)

FTP
Username:        TQ_FTP_refdata
Password:        tt5public82
Port:            21

SFTP
Username:        TQ_SFTP_refdata
Password:        tt5public82
Port:            22
```

Participants are recommended to refresh their reference data set on a daily basis.

## 2.3 Service Features

The service provides a number of separate market reference data files needed to provide all the necessary data for the Turquoise market on Millennium Exchange. There is a separate directory for Production and CDS. Within these directories there are 3 folders (calendar, symbol and tick) as per the table below.

| TYPE | FILE NAME | DIRECTORY |
|---|---|---|
| Instrument | YYYYMMDD_TRQX_Instrument | \symbol |
| Instrument Alternative | Tq_Eq_RefFile_YYYYMMDD | \symbol |
| Calendar | YYYYMMDD_TRQX_Calendar | \calendar |
| Price Tick | YYYYMMDD_TRQX_PriceTick | \tick |
| Price Tick Alternative | Tq_Eq_TickFile_YYYYMMDD | \tick |

### 2.3.1 Data layout

The files of the format YYYYMMDD_TRQX are created in accordance with the following specifications:

| | |
|---|---|
| File format | Csv |
| Fields delimiter | ; (semicolon) |
| Decimal symbol | . (point) |
| Digit grouping symbol (thousands separator) | None |
| Date Fields format | yyyymmdd |

The files of the format Tq_Eq_File_YYYYMMDD are continuing with the same content and format as from the legacy platform.

| | |
|---|---|
| File format | Csv |
| Fields delimiter | , (comma) |
| Decimal symbol | . (point) |
| Digit grouping symbol (thousands separator) | None |

The field lengths identified in the record layout below are maximum lengths. As the data is delimited, fields can be shorter than the maximum length defined.

**Note:** Turquoise may amend these values at anytime following one week's prior written notice. Any changes will be communicated via a Market Notice.

### 2.3.2 Key to Field Type

| | |
|---|---|
| STRING | An alphanumeric field |
| ENUM | A look-up value against a table of options |
| F64 | Floating point 64-bit number encoded as ASCII |
| I32 | 32-bit Integer number encoded as ASCII |

## 2.4 Instrument File Record Layout

The following sections provide details on instrument data available within the service.

### 2.4.1 YYYYMMDD_TRQX_Instrument.csv

| Field | Type (Length) | Description |
|---|---|---|
| Instrument ID | STRING (20) | Instrument ID, unique identifier across the system. |

| | | |
|---|---|---|
| Calendar ID | STRING (30) | Unique key used to link the instrument to the market calendar to be used. The details of the calendar are maintained in the Calendar file. |
| Segment Code | STRING (4) | The code identifying the segment. |
| Post Trade Parameter ID | STRING (30) | Not currently in use by Turquoise. |
| Trading Parameter ID | STRING (30) | Unique key used to link the instrument to the Tick Size table to be used. |
| ISIN Code | STRING (12) | The International Security Identification Number (ISIN).<br>This will be in line with ISO 6186. |
| Deletion Date | STRING (8) | Date on which the instrument will be deleted. Format yyyymmdd. This field may be blank. |
| First Trading Date | STRING (8) | Instrument's First Trading Date. Format yyyymmdd. |
| Instrument Status | ENUM | Whether the instrument is active for trading, suspended from trading or not available for trading (inactive).<br>Possible values:<br>**Value** **Meaning**<br>0 Active<br>1 Suspended<br>2 Inactive |
| Clearing Type | ENUM | Indicates whether the instrument is cleared or not.<br>Possible values:<br>**Value** **Meaning**<br>0 Not Cleared<br>1 Cleared |
| Delete Orders at EOD | ENUM | Delete orders from the order book at the End of the day (EOD)<br>Possible values:<br>**Value** **Meaning**<br>0 No<br>1 Yes |
| Exchange Market Size | I32 | Not currently in use by Turquoise. |
| Min Reserve Order Value | F64 | The minimum consideration value for an order to be hidden (Large In Scale). |
| Minimum Order Size | F64 | Not currently in use by Turquoise. |
| Last Trading Day | STRING (8) | Not currently in use by Turquoise. |
| Lot Size | F64 | This field defines the size increment of an order entered by a participant. Orders may be entered only in multiples of the Order Lot Size for a particular instrument ID. |

| | | |
|---|---|---|
| Security Type | STRING (2) | Provides more granular groupings of instruments<br>Possible values:<br>**Value** **Meaning**<br>CO Exchange Traded Commodity<br>CU Exchange Traded Currency<br>DR Depositary Receipt<br>EQ Equity<br>TF Exchange Traded Fund |
| TIDM | STRING (4) | Not currently in use by Turquoise. |
| Description | STRING (30) | This field is used to specify the name of a tradable instrument. |
| SEDOL | STRING (7) | Not currently in use by Turquoise. |
| ADT | F64 | Used to define thresholds for hidden order entry. |
| Currency | STRING (4) | This field contains the currency in which prices for a tradable instrument must be expressed.<br>A list of all codes is contained in ISO 4217 - Codes for the representation of currencies and funds, except that, for SEAQ compatibility, GBX has been retained. |
| Bid Status | ENUM | Not currently in use by Turquoise. |
| DOL Indicator | ENUM | Not currently in use by Turquoise. |
| DOL Section Number | STRING (4) | Not currently in use by Turquoise. |
| Expiry Source | STRING (8) | Not currently in use by Turquoise. |
| Issuer Code | STRING (6) | Not currently in use by Turquoise. |
| Issuer Name | STRING (255) | Not currently in use by Turquoise. |
| Normal Market Size | I10 | Not currently in use by Turquoise. |
| Ratio | STRING (8) | Not currently in use by Turquoise. |
| Settlement Type | STRING | Not currently in use by Turquoise. |
| Standard Market Size | I10 | Not currently in use by Turquoise. |
| Instrument Name | STRING (40) | Not currently in use by Turquoise. |
| DOL Symbol | STRING (36) | Not currently in use by Turquoise. |
| Unit of Quotation | I10 | Not currently in use by Turquoise. |
| Max Spread Floor | F64 | Not currently in use by Turquoise. |

| | | |
|---|---|---|
| Max Spread Percentage | F64 | Not currently in use by Turquoise. |
| Country of Register | STRING (2) | This specifies the country of Register for a specific tradable instrument.<br>This will be in line with ISO 3166. |
| Covered Warrant Strike Price | STRING (8) | Not currently in use by Turquoise. |
| Covered Warrant Expiry | STRING (8) | Not currently in use by Turquoise. |
| Sector | STRING (4) | Not currently in use by Turquoise. |
| Multicast ID | ENUM | This specifies the multicast channel through which market data for the instrument is broadcast. |
| Covered Warrant Strike Currency | STRING (TBC) | Not currently in use by Turquoise. |
| Covered Warrant Type | STRING (TBC) | Not currently in use by Turquoise. |
| Covered Warrant Style | STRING (TBC) | Not currently in use by Turquoise. |
| Reference Price | F64 | The Reference Price used to calculate LIS and the starting point for Price Bands. This will be set to the Primary Market Last Trading Price subject to alterations due to corporate actions, etc.<br>The Reference Price may be changed during the day subject to market movements. |

### 2.4.2 Tq_Eq_RefFile_YYYYMMDD.csv

| Field | Type (Length) | Description |
|---|---|---|
| Name | STRING (30) | This field is used to specify the name of a tradable instrument. |
| Market ID | STRING (4) | MIC code |
| Market Name | STRING (30) | Full name of MIC |
| ISIN Code | STRING (12) | The International Security Identification Number (ISIN).<br>This will be in line with ISO 6186. |
| Symbol | STRING (20) | Instrument ID, unique identifier across the system. |
| Currency | STRING (4) | This field contains the currency in which prices for a tradable instrument must be expressed.<br>A list of all codes is contained in ISO 4217 - Codes for the representation of currencies and funds, except that, for SEAQ compatibility, GBX has been retained. |

| | | |
|---|---|---|
| Visibility | STRING (1) | This field will populate with either<br><br>**Value** / **Meaning**<br>I — Integrated only<br>M — Mid-Point only<br>B — Both integrated and mid-point books |
| CSD | STRING (2) | This specifies the country of Register for a specific tradable instrument.<br>This will be in line with ISO 3166. |
| ADT | F64 | Used to define thresholds for hidden order entry. |
| LIS Limit | F64 | The minimum consideration value for an order to be hidden (Large In Scale). |
| Tick Table | STRING (30) | Unique identifier for the Price Tick that links the data in the file to other reference data files. |
| Closing Price | F64 | The Reference Price used to calculate LIS and the starting point for Price Bands. This will be set to the Primary Market Last Trading Price subject to alterations due to corporate actions, etc.<br>The Reference Price may be changed during the day subject to market movements. |
| Lower Limit | F64 | Lower price band value for that tick size. |
| Tick Size | F64 | The code to identify the valid format in which prices can be entered/displayed. The price must be a multiple of this Tick Size. |

## 2.5 Calendar File Record Layout

The following sections provide details on calendar reference data available within the reference data service.

### 2.5.1 YYYYMMDD_TRQX_Calendar.csv

| Field | Type (Length) | Description |
|---|---|---|
| Calendar ID | STRING (30) | Unique code used to identify the calendar. This code is used to link the calendar to the instrument. |
| Calendar Date | STRING (8) | Calendar Date, format yyyymmdd. |
| Description | STRING (30) | Name used to identify the calendar. |
| Early Closing | ENUM | Whether the calendar allows early closing or not. Possible values:<br>**Value** **Meaning** |

| | | |
|---|---|---|
| | | 0 No<br>1 Yes |
| Trading Allowed | ENUM | Whether Trading is allowed on this day.<br>Possible values:<br>**Value** **Meaning**<br>0 No<br>1 Yes |

# 2.6 Price Tick File Record Layout

## 2.6.1 YYYYMMDD_TRQX_PriceTick.csv

| Field | Type (Length) | Description |
|---|---|---|
| Price Tick Table ID | STRING (30) | Unique identifier for the Price Tick that links the data in the file to other reference data files. |
| Decimals | I32 | Maximum number of decimals supported by the Tick Structure. |
| Description | STRING (100) | Name used to identify the Price Tick. |
| Max Value | F64 | Upper price band value for that tick size. |
| Min Value | F64 | Lower price band value for that tick size. |
| Tick Value | F64 | The code to identify the valid format in which prices can be entered/displayed. The price must be a multiple of this Tick Size. |

## 2.6.2 Tq_Eq_TickFile_YYYYMMDD.csv

| Field | Type (Length) | Description |
|---|---|---|
| Tick Table | STRING (30) | Unique identifier for the Price Tick that links the data in the file to other reference data files. |
| Band | I32 | Sequential line in the tick table |
| Lower Limit | F64 | Lower price band value for that tick size. |
| Tick Size | F64 | The code to identify the valid format in which prices can be entered/displayed. The price must be a multiple of this Tick Size. |

# 3 Customer Testing

The purpose of the CDS files is to facilitate any future changes to the format of the files. CDS reference data is refreshed regularly on Turquoise. As such customers are advised to use Production reference data files for CDS.

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