Document title

EURONEXT NEXTHISTORY TRADES AND QUOTES CLIENT SPECIFICATION

Version	Date
2.2.	14 May 2015

PREFACE

DOCUMENT HISTORY

The following table provides a description of all changes to this document.

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	14 Jun 2011	Approved NYSE Liffe version for release
1.1	23 Aug 2011	Addition of material on European Cash, NAE and NYSE BondMatch
	6 Oct 2011	■ Updated file-naming conventions
		■ Removed system overview section
		■ Updated descriptions in Section 3.3 (Referential Master Files)
		■ Added and updated Appendix C (Exchange-Specific Information: European Cash)
		■ Updated format of field names throughout
	17 Nov 2011	Updated 'Type' column in Table 20 (NYSE Euronext XDP European Cash Feed Field Values)
	23 Nov 2011	■ Added Section 1.9 (FTP Directory Structure)
		■ Added Table 24 (NYSE Normalised Update Types – NYSE Euronext Cash)
		■ Added section on Alternative Products
1.2	7 Dec 2011	■ Renamed document
		■ Added Appendix D (NYSE Arca Europe) and Appendix E (NYSE BondMatch)
1.3	15 Dec 2011	Added the 'Clear Order Book' Update Type to Tables 20 and 24
1.4	4 Jul 2012	Added sections on TAQ Liffe EOD.
1.5	12 Oct 2012	Added sections on TAQ NYSE Euronext Cash & Index EOD products.
	21 Jan 2013	Added Update Types for Retail Matching Facility trades and quotes
1.6	31 May 2013	Added two new fields to Cash Ref file: SymbolIndex and Mnemonic. Not used for Derivatives products.
1.7	25 June 2014	TAQ Europe Rebranded NextHistory Trades and Quotes Rebranded with new Euronext Template
1.8	12 Sep 2014	Updated the Euronext Service Operations email address
1.9	22 Oct 2014	Removed Option Valuation and B Clear RAW File from NextHistory Trades and Quotes Products
2.0	05 Dec 2014	Changes resulting from migration to new Euronext data delivery infrastructure – Planned for Mon 16 March 2015

VERSION NO.	DATE	CHANGE DESCRIPTION
		- Added section 1 – NEW DATA DELIVERY INFRASTRUCTURE - Edited section 3 – PRODUCT OVERVIEW
2.1	16 Mar 2015	Updated Euronext Service Operations telephone number Updated dates in section 1.2 Transition Period
2.1	14 Mau 2015	Updated Euronext Service Operations email address

CONTACT INFORMATION

For technical support, please contact the **Euronext Service Operations**:

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FURTHER INFORMATION

■ For additional product information, please contact us at databyeuronext@euronext.com.

CONTENTS

NEW EURONEXT DATA DELIVERY INFRASTRUCTURE

Further to its IPO in June 2014, Euronext has been working towards fully separating its operational processes and IT systems from the IntercontinentalExchange Group (ICE). As part of this effort, Euronext has invested in building a new data delivery infrastructure to manage the distribution of its non-real time market data products that will fully replace the current data delivery infrastructure (www.nyxdata.com, ftp2.nyxdata.com, ftpeu.nyxdata.com, ftp.eu.nyxdata.com) mostly managed by ICE.

Euronext is now pleased to announce the new data delivery infrastructure will be in production on 13 April 2015. Customers are required to have adjusted all their processes and systems by this date in order to continue to access and process Euronext data .

It is important to note that the delivery of Euronext data on the current data delivery infrastructure will be discontinued permanently by close of business on 10 April 2015.

Euronext will provide customers with a transition period to allow ample time to adjust their processes and systems to ensure a smooth transition from the old to new data delivery infrastructures.

The detailed transition plan and an overview of the changes are presented below.

1.1   Overview of the changes that impact Euronext NextHistory Trades and Quotes

The implementation of the new data delivery infrastructure does not entail any changes to the Euronext NextHistory Trades and Quotes Files:

The changes resulting from the implementation of the new data delivery infrastructure are limited to the location where the files will be accessed by clients.

■   The new PRODUCTION ftp server will be ftp.data.euronext.com.

■   An EUA instance of the FTP server (ftp.eua-data.euronext.com) will be available to customers going forward.

■   The structure of the ftp directories will be slightly modified.

Please see Section 3 of this Client Specification for details.

INTRODUCTION

NextHistory Trades and Quotes is designed to provide clients with a broad history of Euronext Cash, Derivatives and Indices data and also LIFFE[1] (London) derivatives markets data. It offers historical data for the period January 2011 to April 2014.

This document provides detailed information about the features of the NextHistory Trades and Quotes , along with the file formats that NextHistory Trades and Quotes will follow.

Appendices provide additional exchange-specific information detailing the field content for each of the supported European markets.

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[1] LIFFE is an exchange operator owned by the InterContinentalExchange, Inc.

PRODUCT OVERVIEW

The NextHistory Trades and Quotes provide Level 1 (Trades and Quotes) and Level 2 (Market Depth) historical (T+1) data for Euronext exchanges and LIFFE (London) markets.. NextHistory Trades and Quotes captured data in real time from former NYSE Euronext's feeds.

Two types of files are generated by NextHistory Trades and Quotes:

■   "Raw" feed handler playback files

■   Normalised data files

The following diagram provides an overview of how the NextHistory Trades and Quotes were produced. The daily file generation stopped on 30 April 2014.

Figure 1 NextHistory Trades and Quotes Overview
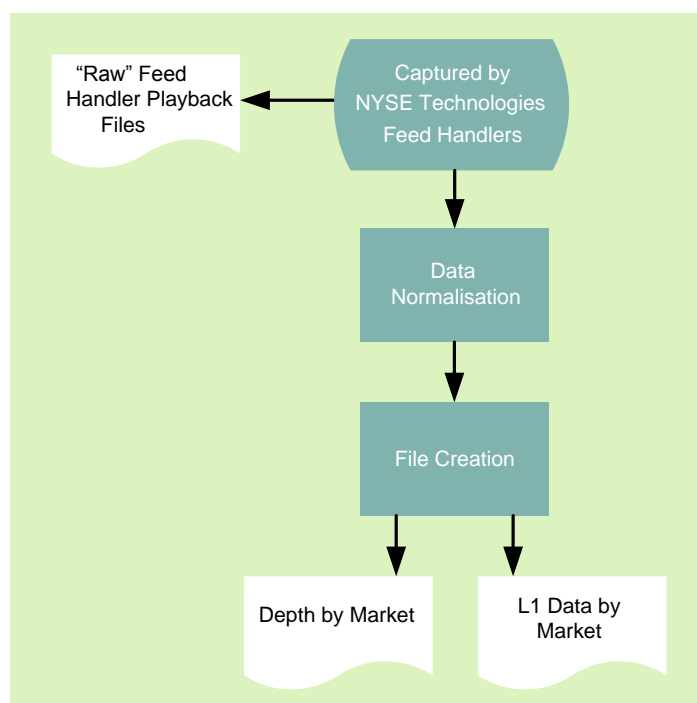
RAW PLAYBACK DATA

Raw feed handler playback data is of primary interest to quant-heavy firms or groups that want to analyze and reproduce what occurred "on the wire" in real time. Clients can analyze these playback files directly.

NORMALISED DATA

Normalised data in ASCII, pipe-delimited format is provided for Euronext exchanges and indices as well as LIFFE (London) derivatives markets . NextHistory Trades and Quotes captured data from these exchanges within a single ticker plant. This means that the Line Time (the time that packets hit the feed handlers) is common across all exchanges. This capture architecture allows for much more accurate backtesting and analysis because clients have the ability to replicate books and L1 data *as they would be received in a production ticker plant*.

DATASETS CAPTURED

The NextHistory Trades and Quotes capture the following datasets and provides them to clients on a T+1 basis.

Table 1 Datasets Captured

LEVEL	DATASET	ASSET CLASS
Level 1	LIFFE (London) and Euronext derivatives Level 1	Derivatives
	Euronext Level 1	Equities and Warrants
	Luxembourg Level 1	Equities
	NYSE Arca Europe Level 1	Equities
	BondMatch Level 1	Corporate Bonds
Level 2	Liffe (London) and Euronext derivatives Full Level 2	Derivatives
	Euronext Level 2	Equities and Warrants
	Luxembourg Level 2	Equities
	NYSE Arca Europe Level 2	Equities
	BondMatch Level 2	Corporate Bonds

SUPPORTED DATA TYPES

NextHistory Trades and Quotes data files are generated for the following data types:

- **Referential Data**   Contract Details files are provided for each exchange, and include details of all tradable instruments for each individual exchange. Additionally for derivatives exchanges only, Outright Details and Strategy Details files are provided, giving instrument details for outright Futures/Options and strategy instruments respectively. Referential data files are created using the data supplied by the source exchange for different markets and held in the Historical Data Store, plus any intraday updates sent by the exchange.

- **Trade Data**   A file of executed trades, created from the normalised data held in the Historical Data Store at the end of each trading day.

- **Trades & Quotes**   A file of interleaved Trades and Quotes where Quotes are best bid/offer only throughout the full trading day.

- **Trades & Orders**   A file of interleaved Trades and Orders where all price levels of the order book are included to give Full Market Depth; all order types provided by the source exchange (for example, implied quotes) are included.

- **End of Day (EOD) Data**   A file comprising EOD (or summary) data for all Equities, Warrants, Bonds, Indices and Derivatives for all LIFFE (London) derivatives markets (including trading activity reported through the Bclear platform), Euronext Cash and Derivatives markets, NYSE Arca Europe, BondMatch and Luxembourg.

PRICE FORMATS

All prices included in NextHistory Trades and Quotes data files are distributed as real prices, rather than the integer tick representation used by some exchanges.

The exception is for exercise prices in the master files, where if appropriate both the real price and integer tick representation are included.

CLIENT ACCESS

The NextHistory Trades and Quotes data files are sourced from a fully-resilient, highly-available Data Warehouse facility. Client Access to the file is supported directly, with access granted to the FTP Server Farm for permissioned clients. Access is available over the Internet. Client Access is governed by an Entitlements Management system.

FILE FORMAT

All NextHistory Trades and Quotes data files are delivered in ASCII, pipe-delimited format, compressed using GZIP.

FTP DIRECTORY STRUCTURE

Table 2 FTP Details

■ Access prior to 16 March 2015

HOST	PATH
ftpeu.nyxdata.com	Accessed directly from root.

EUA HOST	PATH
Not available	

■ Access after 16 March 2015 (inclusive)

PRODUCTION HOST	PATH
ftp.data.euronext.com	Accessed directly from root.

EUA HOST	PATH
ftp.eua-data.euronext.com	Accessed directly from root.

Table 3 Folder Names – NextHistory Trades and Quotes Derivatives

FILE TYPE	TOP LEVEL
Reference – Contracts	
Commodity Der.	/TAQ_CON_LIF_DER_COD
Equity Der.	/TAQ_CON_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_CON_LIF_DER_FID

FILE TYPE	TOP LEVEL
Index Der.	/TAQ_CON_LIF_DER_IND
Reference – Outrights	
Commodity Der.	/TAQ_OUT_LIF_DER_COD
Equity Der.	/TAQ_OUT_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_OUT_LIF_DER_FID
Index Der.	/TAQ_OUT_LIF_DER_IND
Reference – Strategies	
Commodity Der.	/TAQ_STR_LIF_DER_COD
Equity Der.	/TAQ_STR_LIF_DER_ EQD
Fixed Inc. Der.	/TAQ_STR_LIF_DER_FID
Index Der.	/TAQ_STR_LIF_DER_IND
Trades	
Commodity Der.	/TAQ_TRD_LIF_DER_COD
Equity Der.	/TAQ_TRD_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_TRD_LIF_DER_FID
Index Der.	/TAQ_TRD_LIF_DER_IND
Trades & Quotes	
Commodity Der.	/TAQ_TNQ_LIF_DER_COD
Equity Der.	/TAQ_TNQ_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_TNQ_LIF_DER_FID
Index Der.	/TAQ_TNQ_LIF_DER_IND
Trades & Orders	
Commodity Der.	/TAQ_TNO_LIF_DER_COD
Equity Der.	/TAQ_TNO_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_TNO_LIF_DER_FID
Index Der.	/TAQ_TNO_LIF_DER_IND
End of Day Summary	
Commodity Der.	/TAQ_EOD_LIF_DER_COD
Equity Der.	/TAQ_EOD_LIF_DER_EQD
Fixed Inc. Der.	/TAQ_EOD_LIF_DER_FID
Index Der.	/TAQ_EOD_LIF_DER_IND

FILE TYPE	TOP LEVEL
Raw Data	
Commodity Der.	/TAQ_RAW_LIFFE_DER_COD
Equity Der.	/TAQ_RAW_LIFFE_DER _EQI
Fixed Inc. Der.	/TAQ_RAW_LIFFE_DER _FID
Index Der.	/TAQ_RAW_LIFFE_DER _EQI

Table 4 Folder Names – NextHistory Trades and Quotes Cash: NYSE Arca Europe

FILE TYPE	TOP LEVEL
Reference	/TAQ_REF_NAE_CSH_ALL
Trades	/TAQ_TRD_NAE_CSH_ALL
Trades & Quotes	/TAQ_TNQ_NAE_CSH_ALL
Trades & Orders	/TAQ_TNO_NAE_CSH_ALL
End of Day Summary	/TAQ_EOD_NAE_CSH_ALL
Raw Data	/TAQ_RAW_NAE_CSH_ALL

Table 5 Folder Names – NextHistory Trades and Quotes Cash: Euronext Equities and Warrants

FILE TYPE	TOP LEVEL
Equities	
Reference	/TAQ_REF_NXT_CSH_EQT
Trades	/TAQ_TRD_NXT_CSH_EQT
Trades & Quotes	/TAQ_TNQ_NXT_CSH_EQT
Trades & Orders	/TAQ_TNO_NXT_CSH_EQT
End of Day Summary	/TAQ_EOD_AMS_CSH_EQT /TAQ_EOD_BRU_CSH_EQT /TAQ_EOD_LIS_CSH_EQT /TAQ_EOD_PAR_CSH_EQT
Raw Data	/TAQ_RAW_NXT_CSH_EQT
Warrants	
Reference	/TAQ_REF_NXT_CSH_WRT
Trades	/TAQ_TRD_NXT_CSH_WRT
Trades & Quotes	/TAQ_TNQ_NXT_CSH_WRT
Trades & Orders	/TAQ_TNO_NXT_CSH_WRT
End of Day Summary	/TAQ_EOD_AMS_CSH_WRT /TAQ_EOD_BRU_CSH_WRT

FILE TYPE	TOP LEVEL
	/TAQ_EOD_LIS_CSH_WRT
	/TAQ_EOD_PAR_CSH_WRT
Raw Data	/TAQ_RAW_NXT_CSH_WRT

Table 6 Folder Names – NextHistory Trades and Quotes Indices

FILE TYPE	TOP LEVEL
	Indices
End of Day Summary	/TAQ_EOD_ALL_CSH_IDX
Raw Data	/TAQ_RAW_NXT_CSH_IDX

Table 7 Folder Names – NextHistory Trades and Quotes Cash: BondMatch

FILE TYPE	TOP LEVEL
Reference	/TAQ_REF_NBM_CSH_ALL
Trades	/TAQ_TRD_NBM_CSH_ALL
Trades & Quotes	/TAQ_TNQ_NBM_CSH_ALL
Trades & Orders	/TAQ_TNO_NBM_CSH_ALL
End of Day Summary	/TAQ_EOD_NBM_CSH_ALL
Raw Data	/TAQ_RAW_NBM_CSH_ALL

Table 8 Folder Names – NextHistory Trades and Quotes Cash: Luxembourg

FILE TYPE	TOP LEVEL
Reference	/TAQ_REF_NXT_CSH_LUX
Trades	/TAQ_TRD_NXT_CSH_LUX
Trades & Quotes	/TAQ_TNQ_NXT_CSH_LUX
Trades & Orders	/TAQ_TNO_NXT_CSH_LUX
End of Day Summary	/TAQ_EOD_LUX_CSH_ALL
Raw Data	/TAQ_RAW_NXT_CSH_LUX

ALTERNATIVE PRODUCTS

For details related to NextHistory Trades and Quotes products and the full range of Euronext data offerings, please contact us at databyeuronext@euronext.com.

FILE NAMING CONVENTIONS

REFERENTIAL MASTER FILES

All Referential Master files are generated according to the following file-naming conventions.

Table 9 Referential Master Files

FIELD	DESCRIPTION
[filetype]	TAQ
[datatype]	*All:* ■ CON (Contracts) ■ REF (Securities) *Derivatives Only:* ■ OUT (Outrights) ■ STR (Strategies)
[marketplace]	■ LIF (Liffe London and Euronext derivatives) ■ NXT (Euronext) ■ NAE (NYSE Arca Europe) ■ NBM (BondMatch)
[assetclass]	■ CSH (Cash, including Indices) ■ DER (Derivatives)
[assetgroup]	*All:* ■ ALL (NYSE Arca Europe and BondMatch) ■ EQT (Cash Equities) ■ FIN (Fixed Income Instruments) ■ IDX (Indices) ■ LUX (Luxembourg) ■ OTH (Other) ■ WRT (Warrants and Certificates) *Derivatives Only:* ■ ALL (All) ■ FID (Fixed Income Derivatives) ■ EQD (Equity Derivatives) ■ IND (Index Derivatives) ■ COD (Commodity Derivatives)
[date]	YYYYmmdd

Example

The NextHistory Trades and Quotes Referential Master File generated for Euronext Cash Equities on Aug 04, 2011 is named:

`TAQ_REF_NXT_CSH_EQT_20110804.csv.gz`

TRADE FILES

All Trade Files are generated according to the following file-naming conventions.

Table 10 Trade Files

FIELD	DESCRIPTION
[filetype]	TAQ
[datatype]	TRD (Trade)
[marketplace]	■ LIF (Liffe London and Euronext derivatives) ■ NXT (Euronext) ■ NAE (NYSE Arca Europe) ■ NBM (BondMatch)
[assetclass]	■ CSH (Cash (including Indices) ■ DER (Derivatives)
[assetgroup]	*All:* ■ ALL (NYSE Arca Europe and BondMatch) ■ EQT (Cash Equities) ■ FIN (Fixed Income Instruments) ■ IDX (Indices) ■ LUX (Luxembourg) ■ OTH (Other) ■ WRT (Warrants and Certificates) *Derivatives Only:* ■ ALL (All) ■ FID (Fixed Income Derivatives) ■ EQD (Equity Derivatives) ■ IND (Index Derivatives) ■ COD (Commodity Derivatives)
[date]	YYYYmmdd

Example

The Trade File generated for Euronext Cash Equities on Aug 04, 2011 is named:

`TAQ_TRD_NXT_CSH_EQT_20110804.csv.gz`

TRADE AND QUOTE FILES

All Trade and Quote Files are generated according to the following file-naming conventions.

Table 11 Trade and Quote Files

FIELD	DESCRIPTION
[filetype]	TAQ
[datatype]	TNQ (Trade and Quote)
[marketplace]	■ LIF (Liffe London and Euronext derivatives) ■ NXT (Euronext) ■ NAE (NYSE Arca Europe) ■ NBM (BondMatch)
[assetclass]	■ CSH (Cash (including Indices) ■ DER (Derivatives)
[assetgroup]	*All:* ■ ALL (NYSE Arca Europe and BondMatch) ■ EQT (Cash Equities) ■ FIN (Fixed Income Instruments) ■ IDX (Indices) ■ LUX (Luxembourg) ■ OTH (Other) ■ WRT (Warrants and Certificates) *Derivatives Only:* ■ ALL (All) ■ FID (Fixed Income Derivatives) ■ EQD (Equity Derivatives) ■ IND (Index Derivatives) ■ COD (Commodity Derivatives)
[date]	YYYYmmdd

Example

The first Quote File generated for Euronext Cash Equities on Aug 04, 2011 is named:

```
TAQ_TNQ_NXT_CSH_EQT_20110804.csv.gz
```

TRADE AND ORDER FILES

All Trade and Order Files are generated according to the following file-naming conventions.

Table 12 Trade and Order Files

FIELD	DESCRIPTION
[filetype]	TAQ
[datatype]	TNO (Trade and Order)
[marketplace]	■ LIF (Liffe London and Euronext derivatives) ■ NXT (Euronext) ■ NAE (NYSE Arca Europe) ■ NBM (BondMatch)
[assetclass]	■ CSH (Cash (including Indices) ■ DER (Derivatives)
[assetgroup]	*All:* ■ ALL (NYSE Arca Europe and BondMatch) ■ EQT (Cash Equities) ■ FIN (Fixed Income Instruments) ■ IDX (Indices) ■ LUX (Luxembourg) ■ OTH (Other) ■ WRT (Warrants and Certificates) *Derivatives Only:* ■ ALL (All) ■ FID (Fixed Income Derivatives) ■ EQD (Equity Derivatives) ■ IND (Index Derivatives) ■ COD (Commodity Derivatives)
[date]	YYYYmmdd

Example

The Order File generated for Euronext Cash Equities on Aug 04, 2011 is named:

```
TAQ_TNO_NXT_CSH_EQT_20110804.csv.gz
```

END OF DAY (EOD) FILES

All NextHistory Trades and Quotes EOD files are generated according to the following file-naming conventions.

Table 13 End of Day Files

FIELD	DESCRIPTION
[filetype]	TAQ (Trades and Quotes)
[datatype]	EOD (End of Day)
[marketplace]	■ LIF (Liffe London and Euronext Derivatives) ■ AMS (Euronext Amsterdam) ■ BRU (Euronext Brussels) ■ LIS (Euronext Lisbon) ■ PAR (Euronext Paris) ■ NAE (NYSE Arca Europe) ■ NBM (BondMatch) ■ LUX (Luxembourg)
[assetclass]	■ DER (Derivatives) ■ CSH (Cash including Indices)
[assetgroup]	■ ALL (All) ■ COD (Commodity Derivatives) ■ EQD (Equity Derivatives) ■ EQT (Equities) ■ FID (Fixed Income Derivatives) ■ FIN (Fixed Income Instruments) ■ IDX (Indices) ■ IND (Index Derivatives) ■ OTH (Other) ■ WRT (Warrants and Certificates)
[date]	YYYYmmdd

Examples

The EOD file generated for Liffe London and Euronext Fixed Income Derivatives on March 31, 2011 is named:

`TAQ_EOD_LIF_DER_FID_20110331.csv.gz`

The EOD file generated for the Euronext Paris Equities on September 30, 2011 is named:

`TAQ_EOD_PAR_CSH_EQT_20110930.csv.gz`

FIELD LAYOUTS

All product variants in NextHistory Trades and Quotes follow the file format definitions described in this section.

Note that not all fields will be filled for all exchanges. Refer to the exchange-specific detail in the appendices for more information.

INTRODUCTION

The first field in all records contains a RecordType value that defines the type of record reported. Valid RecordTypes are:

- H = Header

- F = Footer (Trailer)

- D = Descriptor

- R = Reference data

  - RC = Contract Details Reference Data

  - RM = Referential Master File

  - RO = Outright Details Reference Data (derivatives only)

  - RS = Strategy Details Reference Data (derivatives only)

- T = Trade data

- Q = Trade and Quote data

- O = Trade and Order data

- E = End of Day data

HEADER AND FOOTER

Header Record

There is a single Header Record at the start of each historical data file.

For example: `H|TAQ_REF_NXT_CSH_EQT_20110804.csv.gz|2011-08-15T16:55:44 UTC`

Table 14 Header Record File Definition

FIELD	TYPE	DESCRIPTION
Record Type	Alphanumeric	Identifier indicating the type of record (in this case, a Header Record). H
File Identifier	Alphanumeric	The actual filename in the same format as the filename itself: [filetype]_[datatype]_[marketplace]_[assetclass]_[assetgroup]_[date].csv.gz For example: TAQ_TRD_LIF_DER_FID_20110331.csv.gz
Date and time of file	ISO standard for dates	Date and start time of file generation trigger

FIELD	TYPE	DESCRIPTION
generation	and times	according to the System Clock. The time zone is given at the end (UTC by default). [YYYY-mm-ddThh:mm:ss UTC]

Footer Record

There is a single Footer Record at the end of each historical data file.

For example: `F|TRLTOTALRECORDS=12801|2011-08-15T17:04:10 UTC`

Table 15 Footer Record File Definition

FIELD	TYPE	DESCRIPTION
Record Type	Alphanumeric	Identifier indicating the type of record (in this case, a Footer Record). F
Footer	Alphanumeric	F|TRTOTALRECORDS=%d
Date and time of file generation	ISO standard for dates and times	Date and end time of file generation trigger according to the System Clock. The time zone is given at the end (UTC by default). [*YYYY-mm-dd*T*hh*:*mm*:*ss* UTC]

REFERENTIAL MASTER FILES

Referential Master Files are split into three segments: Contract/Securities Details, Outright Details and Strategy Details. Outright Details and Strategy Details are provided for derivatives exchanges only.

Contract/Securities Details

Descriptor Record

There is a single Descriptor Record in each Contract/Securities Details referential data file.

Data Record

There are multiple Data Records, one for each tradable contract for the exchange plus one for each underlying contract.

Table 16 Contract/Securities Details Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. Referential Data Record. RC, RM
ExchangeName	Alphanumeric	Long Name of the exchange. Encased in double quotes (") to prevent delimiter problems in free text fields.
ExchangeCode	Alphanumeric	A code typically indicating the exchange on which a contract or security trades.
InstrumentType	Alphanumeric	Instrument Type as defined by the exchange.
InstrumentTrading Symbol	Alphanumeric	Official Exchange Trading Symbol of Instrument.

FIELD	TYPE	DESCRIPTION
InstrumentClearing Symbol	Alphanumeric	Official Exchange Clearing Symbol of Instrument, also referred to as Logical Commodity Code.
InstrumentID	Alphanumeric	A unique identifier for the instrument as distributed over the market data feed. Will be empty for derivatives exchanges (populated in Outright or Strategy Details file).
Exchange InstrumentID	Alphanumeric	Instrument identifier as defined by the exchange. Will be empty for derivatives exchanges (populated in Outright or Strategy Details file).
Mnemonic	Alphanumeric	Mnemonic code of the instrument. This field is not populated for every instrument. It is used only in NextHistory Traded and Quotes Euronext Equities and Warrants files.
SymbolIndex	Alphanumeric	XDP proprietary unique identification of the instrument. It is used only in NextHistory Trades and Quotes Euronext Equities and Warrants files.
InstrumentGroup	Alphanumeric	Product / Trading / Asset Group Identifier – a description of the market segment. Empty if not available. Encased in double quotes (") to prevent delimiter problems in free text fields.
InstrumentName	Alphanumeric	Full name of Instrument / Class. Encased in double quotes (") to prevent delimiter problems in free text fields.
MarketIdCode	Alphanumeric	MIC – Place of Trading (Market Place). Empty if not available.
ExerciseType	Alphanumeric	Exercise type of instrument. For Options only. ■ European style – 0 ■ American style – 1 ■ Blank, if not applicable.
UnderlyingISIN	Alphanumeric	ISIN code of underlying instrument, where applicable.
ContractCurrency	Alphanumeric	Trading currency of the contract or security: ■ Cash and Derivatives: ISO Currency Code. ■ Indices: Currency of market capitalisations of the Index constituents.
SettlementMethod	Alphanumeric	Settlement Method: ■ C – Cash settlement ■ P – Physical settlement
PriceUnitType	Floating Point	Price unit type of instrument (Cash instruments only).
NumberOfShares	Integer	Number of Shares of instrument (Cash instruments

FIELD	TYPE	DESCRIPTION
		only).
ICBClassification	Integer	ICB Classification of instrument (Cash instruments only).
SourceSequence Number	Alphanumeric	This field specifies the sequence number assigned by the source system to this message. Please note that while the sequence number increases serially, it does not increase monotonically.
EventTime	hh:mm:ss.ddd	This field specifies the message generation time. The number in this field represents the number of milliseconds since midnight of the same day.
LastAdjustedPrice	Floating Point	Last traded price of the previous trading day after application of the adjustment coefficient (to be calculated with the LastAdjPriceScaleCode). Not provided for European instruments.
FixPriceTick	Floating Point	Indicates the amount of the fixed tick size, combine with FixPriceTickScaleCode. Provided only for tradable instruments.
TypeOfMarket Admission	Alphanumeric	Indicates the type of market to which a security has been listed.
IssuingCountryCode	Alphanumeric	Country code of location for the corporate headquarters of the company that issued the instrument. (ISO 3166-3A).
TypeOfCorporateEvent	Alphanumeric	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. See **Table 32 Euronext XDP European Cash Feed Field Values**.
QuantityNotation	Alphanumeric	Specifies the nature of the amount expression used for negotiating the instrument on the market. Valid Values: ■ 'UNT' – In unit (number of shares), left padded ■ 'FMT' – In facial amount (bonds expressed in %), left padded ■ Null – Not applicable
TickSizeTableId	Alphanumeric	The key for the variable price tick table consists of two data items (the index for a set of variable price ticks, the lowest value in a range of prices). The index data item refers to a set of lines in that table that make it possible to determine the price tick for an instrument, based on the price range in which a given price for the instrument falls (that is, a price to be rounded off or a limit to be checked). When a listed security is created, or when the characteristics of an existing listed security are

FIELD	TYPE	DESCRIPTION
		modified, this data item is (re)initialized to the "typical" index value for this listed security (if a value is not provided for the Fixed Price Tick data item). This "typical index" is derived from the following three characteristics: ■ Trading currency (type of unit in which the listed security's price is expressed) ■ Broad instrument category associated with the listed security ■ Trading group
MarketFeedCode	Alphanumeric	Market data flow to which the instrument belongs.
FinancialMarketCode	Alphanumeric	Financial market code.
NominalMarketPrice	Floating Point	Amount of the nominal value of the security (to be calculated with the NomMktPriceScaleCode).
LotSize	Floating Point	The amount, expressed in terms of the number of shares or in an amount or a volume of the capital, of the lot size. The lot size is a minimum tradable quantity that is set for each instrument by Euronext. The quantity of an order entered by a trading member on the market must be a multiple of the lot size. This number is also called the "Quotité de Marché" (minimum market tradable quantity).

Outright Details – Derivatives Only

This section describes the Descriptor and Data Records for the Outright Details segment.

Descriptor Record

There is a single Descriptor Record in each Outright Details referential data file.

Data Record

There are multiple Data Records, one for each outright instrument for each tradable contract for the exchange.

Table 17 Outright Details Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record i.e. Referential Data Record. RO
ExchangeCode	Alphanumeric	A code typically indicating the type of contracts traded on an exchange.
InstrumentType	Alphanumeric	Instrument Type as defined by the exchange: ■ F – Future ■ O – Option

FIELD	TYPE	DESCRIPTION
		Plus all valid Underlying Instrument Types.
InstrumentTrading Symbol	Alphanumeric	Official Exchange Trading Symbol of Instrument.
InstrumentID	Alphanumeric	A unique identifier for the instrument as distributed over the market data feed.
Exchange InstrumentID	Alphanumeric	Instrument identifier as defined by the exchange.
ExpiryDate	YYYYmmddhh:mm:ss:ddd	Expiry date of instrument. If an expiry time is not supplied at source then the time portion will be reported in the time portion of the expiry date as 23:59:59.999. If an expiry time is made available by the source then the time received should be reported in the time portrait of the expiry date. If the granularity reported by the source is not to millisecond granularity, then zeros will be used to populate up to millisecond granularity. For example, if the source supplies "23:00" then ":00.000" will be appended so the reported time portion would be "23:00:00.000". **Note**: Even if a time of 23:59 is supplied, :00.000 will still be appended giving 23:59:00.000.
UnderlyingExpiryDate	YYYYmmddhh:mm:ss:ddd	Expiry date of the underlying instrument. Underlying Futures for Options contracts only. If an expiry time is not supplied at source then the time portion will be reported in the time portion of the underlying expiry date as 23:59:59.999. If an expiry time is made available by the source then the time received should be reported in the time portion of the underlying expiry date. If the granularity reported by the source is not to millisecond granularity, then zeros will be used to populate up to millisecond granularity. For example, if the source supplies "23:00" then ":00.000" will be appended so the reported time portion would be "23:00:00.000". **Note**: Even if a time of 23:59 is supplied, :00.000 will still be appended giving 23:59:00.000.
ExercisePrice	Integer	For Options only. The exercise (strike) price of the Option instrument in integer tick representation. Empty field for Futures.
ActualExercisePrice	Floating Point	For Options only. (To be calculated with Scalecode price format.) Actual Strike price of instrument. Empty field for Futures.

FIELD	TYPE	DESCRIPTION
		The Decimal Locator splits the exercise price into two parts, known as the "points" and the "ticks" parts of the price. The "points" part is the integer part of the strike; the "ticks" part is divided by the strike denominator to get the fractional part. ■ E – Exercise price ■ L – Exercise price decimal locator ■ D – Exercise price denominator ■ P – "points" value of strike = INT($E/10^L$) (NB: truncated, not rounded) ■ T – "ticks" value of strike = E MOD 10^L Actual strike price = $P + T/D$.
ExercisePriceDecimal Locator (L)	Integer	For Options only (to be used in calculating Scalecode price format). Empty field for Futures.
ExercisePrice Denominator (D)	Integer	For Options only (to be used in calculating Scalecode price format). Empty field for Futures.
OptionCategory	Alphanumeric	For Options only. Type of Option: ■ C – Call ■ P – Put
FirstTradingDate	YYYYmmdd	First trading date of instrument.
LastTradingDate	YYYYmmdd	Last trading date of instrument.
LotSize	Floating point	Trading lot of instrument. Series / Instrument level value.

Strategy Details – Derivatives Only

This section describes the Descriptor and Data Records for the Strategy Details segment.

Descriptor Record

There is a single Descriptor Record in each Strategy Details referential data file.

Data Record

There are multiple Data Records, one for each strategy instrument for each tradable contract for the exchange.

Table 18 Strategy Details Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. Referential Data Record. RS
ExchangeCode	Alphanumeric	A code typically indicating the type of contracts

FIELD	TYPE	DESCRIPTION
		traded on an exchange.
InstrumentType	Alphanumeric	Instrument Type as defined by the exchange: ■ F – Future ■ O – Option Plus all valid Underlying Instrument Types.
InstrumentTrading Symbol	Alphanumeric	Official Exchange Trading Symbol of Instrument.
InstrumentID	Alphanumeric	A unique identifier for the instrument as distributed over the market data feed.
Exchange InstrumentID	Alphanumeric	Instrument identifier as defined by the exchange.
StrategyMarketCode	Alphanumeric	Indicates the type of strategy listed. For example, Calendar Spread.
LegInstrumentID	Alphanumeric	A unique identifier for the outright leg instrument as distributed over the market data feed – repeated for every leg of strategy. Corresponds to the Exchange Instrument ID in the Outright Details file for the Future/Option leg instrument.
LegSide	Alphanumeric	Buy or Sell – repeated for every leg of strategy.
LegRatio	Floating point	Ratio of this leg compared to other legs of strategy – repeated for every leg of strategy. **Note**: Non-integer leg ratios are supported in XDP derivatives.
LegPrice	Floating point	Price at which the Underlying contingent leg for Delta Neutral and Conversion Reversal strategies must trade – repeated for every leg of strategy.

TRADE FILES

The following tables describe the format of the NextHistory Trades and Quotes by Market Trade File.

Descriptor Record

There is a single Descriptor Record in each Trade data file.

Data Record

There are multiple Data Records, one for each executed trade.

Table 19 Trade Files Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. Trade Data Record. T
InstrumentID	Alphanumeric	Unique and normalised Instrument Identifier / Symbol Name. This will match the instrument identifier supplied by the source exchange and the structure therefore will vary across source exchanges.
UpdateType	Alphanumeric	Identifies the original, un-normalised, exchange-

FIELD	TYPE	DESCRIPTION
		supplied type of update / trade condition.
NYSEUpdateType	Alphanumeric	Identifies the normalised type of update / trade condition as recorded by Euronext (formerly NYSE Euronext) – see Exchange-Specific Information: Liffe London and Euronext derivatives & Exchange-Specific Information: Euronext Cash.
TradeID	Alphanumeric	Unique Trade Identifier as supplied by the exchange.
SourceSequenceNum	Alphanumeric	Sequence Number (where reliable) assigned to each message/packet distributed by the exchange market data dissemination system for each service publication channel.
EventDate	YYYYmmdd	Date of the event on the exchange.
EventTime	hh:mm:ss.ddd	Time of the event on the exchange (milliseconds).
SendTime	hh:mm:ss.ddd	Time the event was published by the exchange (milliseconds).
ReceiveDate	YYYYmmdd	Date the published event by the exchange was received by the data collector.
ReceiveTime	hh:mm:ss.ddd	Time the published event by the exchange was received by the data collector (milliseconds).
ReceiveTimeMicroSecs	nnn	Microsecond component of the time the published event by the exchange was received by the data collector (microseconds).
MarketPlaceID	Alphanumeric	Trading Venue where the event was executed. Usually this will be the MIC code of the execution venue, though it could be the BIC if the update comes from the systematic internaliser within the feed handlers.
NYSEMarketPlaceType	Alphanumeric	Normalised type of execution venue, for example, OnExchange, OnExchangeOffBook, OffBook and so forth.
Price	Floating Point	Price – (real price format).
Volume	Integer	Volume
CancelCorrectFlag	Alphanumeric	Indicates whether or not the reported update relates to a cancellation: ■ 'CAN' – cancellation ■ 'COR' – correction Otherwise blank.

TRADES AND QUOTE (TOP OF BOOK) FILES

The following tables describe the format of the NextHistory Trades and Quotes by Market Trade and Quote file.

Descriptor Record

There is a single Descriptor Record in each Trade and Quote data file.

Data Record

There are multiple Data Records, one for each change to the BBO with each executed trade interleaved.

Table 20 Trade and Quote Files Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. Trade and Quote Data Record. Q
InstrumentID	Alphanumeric	Unique and normalised Instrument Identifier / Symbol Name. This will match the instrument identifier supplied by the source exchange and the structure therefore will vary across source exchanges.
UpdateType	Alphanumeric	Identifies the original, un-normalised, exchange-supplied type of update / trade condition.
NYSEUpdateType	Alphanumeric	Identifies the normalized type of update / trade condition as recorded by Euronext (formerly NYSE Euronext) – see Exchange-Specific Information: Liffe London and Euronext derivatives & Exchange-Specific Information: Euronext Cash.
TradeID	Alphanumeric	Unique Trade Identifier as supplied by the exchange.
SourceSequenceNum	Alphanumeric	Sequence Number (where reliable) assigned to each message/packet distributed by the exchange market data dissemination system (For example, Liffe XDP) for each service publication channel.
EventDate	YYYYmmdd	Date of the event on the exchange.
EventTime	hh:mm:ss.ddd	Time of the event on the exchange (milliseconds).
SendTime	hh:mm:ss.ddd	Time that the event was published by the exchange (milliseconds).
ReceiveDate	YYYYmmdd	Date that the published event by the exchange was received by the data collector.
ReceiveTime	hh:mm:ss.ddd	Time that the published event by the exchange was received by the data collector (milliseconds).
ReceiveTimeMicroSecs	nnn	Microsecond component of the time the published event by the exchange was received by the data collector (microseconds).
MarketPlaceID	Alphanumeric	Trading Venue where the event was executed. Usually this will be the MIC code of the execution venue, though it could be the BIC if the update

FIELD	TYPE	DESCRIPTION
		comes from the systematic internaliser within the feed handlers.
NYSEMarketPlaceType	Alphanumeric	normalised type of execution venue. For example, OnExchange, OnExchangeOffBook, OffBook, and so forth.
Price	Floating Point	Price – (real price format).
Volume	Integer	Volume
CancelCorrectFlag	Alphanumeric	Indicates whether or not the reported update relates to a cancellation: ■ 'CAN' – cancellation ■ 'COR' – correction Otherwise blank.

TRADE & ORDER (FULL DEPTH) FILES

The following tables describe the format of the NextHistory Trades and Quotes by Market Trade and Order File.

Descriptor Record

There is a single Descriptor Record in each Trade and Order data file.

Data Record

There are multiple Data Records, one for each Order submitted to the market with each executed trade interleaved.

Table 21 Trade and Order Files Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. Trade and Order Data Record. O
InstrumentID	Alphanumeric	Unique and normalised Instrument Identifier / Symbol Name. This will match the instrument identifier supplied by the source exchange and the structure therefore will vary across source exchanges.
Side	Alphanumeric	Populated for Quotes and Orders to show Bid (B) or Ask (A) independently of Update Type.
UpdateType	Alphanumeric	Identifies the original, un-normalised, exchange-supplied type of update / trade condition.
NYSEUpdateType	Alphanumeric	Identifies the normalized type of update / trade condition as recorded by Euronext (formerly NYSE Euronext) – see Exchange-Specific Information: Liffe and Euronext derivatives & Exchange-Specific Information: Euronext Cash.
TradeOrderID	Alphanumeric	Unique Trade Identifier or Order Identifier as supplied by the exchange.

FIELD	TYPE	DESCRIPTION
SourceSequenceNum	Alphanumeric	Sequence Number (where reliable) assigned to each message/packet distributed by the exchange market data dissemination system (for example, Liffe XDP) for each service publication channel.
EventDate	YYYYmmdd	Date of the event on the exchange.
EventTime	hh:mm:ss.ddd	Time of the event on the exchange (milliseconds).
SendTime	hh:mm:ss.ddd	Time that the event was published by the exchange (milliseconds).
ReceiveDate	YYYYmmdd	Date that the published event by the exchange was received by the data collector.
ReceiveTime	hh:mm:ss.ddd	Time that the published event by the exchange was received by the data collector (milliseconds).
ReceiveTimeMicroSecs	nnn	Microsecond component of the time the published event by the exchange was received by the data collector (microseconds).
MarketPlaceID	Alphanumeric	Trading Venue where the event was executed. Usually this will be the MIC code of the execution venue, though it could be the BIC if the update comes from the systematic internaliser within the feed handlers.
NYSEMarketPlaceType	Alphanumeric	Normalised type of execution venue, for example, OnExchange, OnExchangeOffBook, OffBook and so forth.
Price	Floating Point	Price – (real price format).
Volume	Integer	Volume
VolumeChange	Integer	Indicates the change in the size of the order compared to the previous update. (N/A Liffe London and Euronext derivatives.)
CancelCorrectFlag	Alphanumeric	Indicates whether or not the reported update relates to a cancellation: ■ 'CAN' – cancellation ■ 'COR' – correction Otherwise blank.

NEXTHISTORY TRADES AND QUOTES DERIVATIVES END OF DAY FILES

Derivatives EOD Descriptor Record

There is a single Descriptor Record in each EOD data file.

Derivatives EOD Data Record

There are multiple Data Records, one for each instrument.

Table 22 NextHistory Trades and Quotes Derivatives EOD Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. End of

FIELD	TYPE	DESCRIPTION
		Day Data Record. E
ExchangeCode	Alphanumeric	A code typically indicating the type of contracts traded on an exchange. For example: ■ L – LIFFE Financials ■ O – LIFFE Equities See Appendix A for a full list of field values.
InstrumentType	Alphanumeric	Instrument Type as defined by the exchange: ■ F – Future ■ O – Option ■ S – Stock ■ U – Underlying ■ I – Index ■ X – Exchange Rate
InstrumentTrading Symbol	Alphanumeric	Official Exchange Trading Symbol of Instrument , for example: ■ VOD – Vodafone ■ I – Euribor and so forth.
InstrumentID	Alphanumeric	A unique identifier for the instrument as distributed over the market data feed.
Exchange InstrumentID	Alphanumeric	Instrument identifier as defined by the exchange; the official exchange code of the instrument, for example AMR (Automated Market Reference).
ExpiryDate	YYYYmmddhh:mm:ss:ddd	Expiry date of instrument. If an expiry time is not supplied at source then the time portion will be reported in the time portion of the expiry date as 23:59:59.999. If an expiry time is made available by the source then the time received should be reported in the time portion of the expiry date. If the granularity reported by the source is not to millisecond granularity, then zeros will be used to populate up to millisecond granularity. For example, if the source supplies "23:00" then ":00.000" will be appended so the reported time portion would be "23:00:00.000". **Note**: Even if a time of 23:59 is supplied, :00.000 will still be appended giving 23:59:00.000.
ExercisePrice	Integer	For Options only (real price format). The exercise (strike) price of the Option instrument

FIELD	TYPE	DESCRIPTION
		in integer tick representation. Empty field for Futures.
ActualExercisePrice	Floating Point	For Options only. (To be calculated with Scalecode price format.) Actual Strike price of instrument. Empty field for Futures. The Decimal Locator splits the exercise price into two parts, known as the "points" and the "ticks" parts of the price. The "points" part is the integer part of the strike; the "ticks" part is divided by the strike denominator to get the fractional part. ■ E – Exercise price ■ L – Exercise price decimal locator ■ D – Exercise price denominator ■ P – "points" value of strike = INT(E/10^L) (NB: truncated, not rounded) ■ T – "ticks" value of strike = E MOD 10^L Actual strike price = P + T/D.
OptionCategory	Alphanumeric	For Options only – the type of Option: ■ C – Call ■ P – Put
Open	Floating Point	Opening book trade price for the current day.
High	Floating Point	Highest book trade price for the current day.
Low	Floating Point	Lowest book trade price for the current day.
Yearly High	Floating Point	Highest book trade price for the calendar year.
Yearly Low	Floating Point	Lowest book trade price for the calendar year.
Lifetime High	Floating Point	Highest book trade price for the lifetime of the instrument.
Lifetime Low	Floating Point	Lowest book trade price for the lifetime of the instrument.
Trade Count	Integer	Number of executed trades for the current day.
Percentage Change	Floating Point	Percentage change of last book trade against the previous day settlement price.
Last Book Trade Price	Floating Point	Price of the last book trade.
Close	Floating Point	Close price for the instrument.
Settlement	Floating Point	Settlement price for the instrument.
EDSP	Floating Point	Exchange Delivery Settlement Price for the instrument; will only ever be populated on the instrument expiry day.
Connect Volume	Integer	Total daily volume of trades executed through Central Order Book.

FIELD	TYPE	DESCRIPTION
Bclear Volume	Integer	Total daily volume of trades reported through Bclear.
Total Volume	Integer	Total daily volume of all trades, both through Central Order Book and Bclear.
Open Interest	Integer	Open Interest for the instrument.
Open Interest Date	YYYYmmdd	Date to which the Open Interest applies.

NEXTHISTORY TRADES AND QUOTES CASH END OF DAY FILES

Cash EOD Descriptor Record

There is a single Descriptor Record in each Cash EOD data file.

Cash EOD Data Record

There are multiple Data Records, one for each instrument.

Table 23 NextHistory Trades and Quotes Cash EOD Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. End of Day Data Record. E
ExchangeCode	Alphanumeric	Indicates the Market Place. For a description of which exchange each of the possible codes refers to, see Stock Exchange Code.
InstrumentType	Alphanumeric	Instrument type as defined by the exchange. Valid values are: ■ Government bond ■ Other bond ■ Certificate ■ Investment fund ■ Repo ■ Share ■ Tracker ■ Warrant
InstrumentTrading Symbol	Alphanumeric	Official Exchange Trading Symbol of Instrument , for example: ■ VOD = Vodafone ■ I = Euribor and so forth.
InstrumentID	Alphanumeric	A unique identifier for the instrument as distributed over the market data feed.

FIELD	TYPE	DESCRIPTION
ExchangeInstrumentID	Alphanumeric	Exchange Traded Instrument Identifier. ISIN code of instrument.
InstrumentName	Alphanumeric	Full name of Instrument / Class.
MarketIDCode	Alphanumeric	Place of Trading (Market Place). Empty if not available.
IssuingCountryCode	Alphanumeric	Country code of location for the corporate headquarters of the company that issued the instrument. (ISO 3166-3A).
TracingCurrencyCode	Alphanumeric	ISO currency code.
MarketPlaceType	Alphanumeric	Normalised type of execution venue, for example, OnExchange, OnExchangeOffBook, OffBook, and so forth. Typically there should be one End of Day record for each instrument for each MarketPlaceType, regardless of whether any trades occur during a trading day.
AdjustedPrevClose	Floating Point	Price at which the last trade of the previous day was executed, adjusted for corporate actions.
PreviousClosePrice	Floating Point	Price at which the last trade of the previous day was executed, or the last known traded price.
OpenPrice	Floating Point	Price at which the first trade of the day was executed. If no trades are executed during the trading day, the field is populated with the previous trading day's Close Price.
OpenPriceTime	ISO standard for times	Time of first trade, converted to hh:mm:ss:ddd format (blank if no trades are executed during the trading day).
HighPrice	Floating Point	Highest traded price of the day, expressed in the trading currency (blank if no trades are executed during the trading day).
HighPriceTime	ISO standard for dates and times	Time of highest price, converted to hh:mm:ss:ddd format (blank if no trades are executed during the trading day).
LowPrice	Floating Point	Lowest traded price of the day, expressed in the trading currency (blank if no trades are executed during the trading day).
LowPriceTime	ISO standard for times	Time of lowest price, converted to hh:mm:ss:ddd format (blank if no trades are executed during the trading day).
Turnover	Floating Point	Cumulative turnover for the day (blank if no trades are executed during the trading day).
YearlyHigh	Floating Point	Highest traded price for the calendar year. The field will be reset to zero at midnight on the last day of the calendar year, then set to the value of

FIELD	TYPE	DESCRIPTION
		the OpenPrice when that is populated after opening on the first trading day of the new calendar year. If no trades are executed on a trading day, the field is set to the previous day's Yearly High. Note that this is populated with blanks up to 31 Dec 2012 and populated as described above from 1 Jan 2013 forwards.
YearlyLow	Floating Point	Lowest traded price for the calendar year. The field will be reset to zero at midnight on the last day of the calendar year, then set to the value of the OpenPrice when that is populated after opening on the first trading day of the new calendar year. If no trades are executed on a trading day, the field is set to the previous day's Yearly Low. Note that this is populated with blanks up to 31 Dec 2012 and populated as described above from 1 Jan 2013 forwards.
TradeCount	Integer	Number of trades matched today (set to zero if there are no trades during the trading day).
ClosePrice	Floating Point	Daily close price (blank if no trades are executed during the trading day).
ClosePriceTime	ISO standard for times	Time of last price, converted to hh:mm:ss:ddd format (blank if no trades are executed during the trading day).
TotalVolume	Integer	Total number of units traded since the start of the current session (zero if no trades are executed during the trading day).
BidPrice	Floating Point	Best bid price at market close.
BidSize	Floating Point	Best bid size at market close.
BidTime	Floating Point	Time of bid at market close.
AskPrice	Floating Point	Best ask price at market close.
AskSize	Floating Point	Best ask size at market close.
AskTime	Floating Point	Time of ask at market close.

NEXTHISTORY TRADES AND QUOTES INDICES END OF DAY FILES

Index EOD Descriptor Record

There is a single Descriptor Record in each Indices EOD data file.

Index EOD Data Record

There are multiple Data Records, one for each instrument.

Table 24 NextHistory Trades and Quotes Indices EOD Data Record File Definition

FIELD	TYPE	DESCRIPTION
RecordType	Alphanumeric	Identifier indicating the type of record, i.e. End of Day Data Record.

FIELD	TYPE	DESCRIPTION
		E
ExchangeCode	Alphanumeric	Indicates the Market Place. For a description of which exchange each of the possible codes refers to, see Stock Exchange Code.
InstrumentType	Alphanumeric	Instrument type as defined by the exchange. Valid values are: ■ Index ■ Devise Commerciale (France)
InstrumentTrading Symbol	Alphanumeric	The ISIN code for the index.
InstrumentID	Alphanumeric	A unique identifier for the index as distributed over the market data feed, comprising the ISIN code appended with the Currency Code and Market ID Code.
ExchangeInstrumentID	Alphanumeric	The ISIN code for the index.
InstrumentName	Alphanumeric	Full name of Index.
MarketIDCode	Alphanumeric	Place of Trading (Market Place). Empty if not available.
IssuingCountryCode	Alphanumeric	Country code of location for the corporate headquarters of the company that issued the instrument. (ISO 3166-3A).
TracingCurrencyCode	Alphanumeric	ISO currency code.
MarketPlaceType	Alphanumeric	Normalised type of execution venue, for example, OnExchange, OnExchangeOffBook, OffBook, and so forth. Always 'OnExchange' for Indices.
AdjustedPrevClose	Floating Point	This is blank for Indices.
PreviousClosePrice	Floating Point	Value at close on previous day, or the last known value.
OpenPrice	Floating Point	First value of the day, expressed in the trading currency.
OpenPriceTime	ISO standard for times	Time of first value, converted to hh:mm:ss:ddd format.
HighPrice	Floating Point	Highest value of the day, expressed in the trading currency.
HighPriceTime	ISO standard for dates and times	Time of highest value, converted to hh:mm:ss:ddd format.
LowPrice	Floating Point	Lowest value of the day, expressed in the trading currency.
LowPriceTime	ISO standard for times	Time of lowest value, converted to hh:mm:ss:ddd format.

FIELD	TYPE	DESCRIPTION
Turnover	Floating Point	This is blank for Indices.
YearlyHigh	Floating Point	Highest value for the calendar year. The field will be reset to zero at midnight on the last day of the calendar year, then set to the value of the OpenPrice when that is populated after opening on the first trading day of the new calendar year. Note that this is populated with blanks up to 31 Dec 2012 and populated as described above from 1 Jan 2013 forwards.
YearlyLow	Floating Point	Lowest value for the calendar year. The field will be reset to zero at midnight on the last day of the calendar year, then set to the value of the OpenPrice when that is populated after opening on the first trading day of the new calendar year. Note that this is populated with blanks up to 31 Dec 2012 and populated as described above from 1 Jan 2013 forwards.
TradeCount	Integer	This is zero for Indices.
ClosePrice	Floating Point	Daily close value.
ClosePriceTime	ISO standard for times	Time of last value, converted to hh:mm:ss:ddd format.
TotalVolume	Integer	This is blank for Indices.
BidPrice	Floating Point	This is blank for Indices.
BidSize	Floating Point	This is blank for Indices.
BidTime	Floating Point	This is blank for Indices.
AskPrice	Floating Point	This is blank for Indices.
AskSize	Floating Point	This is blank for Indices.
AskTime	Floating Point	This is blank for Indices.

APPENDIX A: EXCHANGE-SPECIFIC INFORMATION – NEXTHISTORY TRADES AND QUOTES DERIVATIVES

A.1   (NORMALISED) UPDATES TYPES – NEXTHISTORY TRADES AND QUOTES DERIVATIVES

The following table describes the normalised update types for NextHistory Trades and Quotes Derivatives.

Table 25 Normalised Update Types – NextHistory Trades and Quotes Derivatives

UPDATE TYPE	MEANING	UPDATE TYPE
0	Clear Order Book	CLR
1	Best Bid	BB
2	Best Offer (ASK)	BO
3	Bid	B
4	Offer (ASK)	A
5	Total Traded Volume	TTV
6	Conventional Trade	T
7	Block Trade	BL
8	Basis Trade	BA
9	Professional Trade	PR
10	Guaranteed Cross Trade	GX
11	Against Actual Trade	AA
12	Asset Allocation Trade	AL
13	External Match Trade	EXT
14	Exchange For Swap Trade	EFS
15	Exchange For Physical Trade	EFP
16	Strategy Leg Trade	S
17	Implied Bid	ib
18	Implied Offer (ASK)	ia
19	Indicative Open Price	IOP
29	Strategy Leg Conventional Trade	ST
30	Strategy Leg Block Trade	SBL
31	Strategy Leg Basis Trade	SBA
33	Strategy Leg Guaranteed Cross Trade	SCR
34	Strategy Leg Against Actual Trade	SAC
35	Strategy Leg Asset Allocation Trade	SAL
36	Strategy Leg External Match Trade	SXT
37	Strategy Leg Exchange For Swap Trade	SES
38	Strategy Leg Exchange For Physical Trade	SEP
39	Bclear Trade	BCT

A.2   NEXTHISTORY TRADES AND QUOTES DERIVATIVES SERVICE IDS

The following different multicast groups (known as Service IDs) are made available and are defined as described in the table below.

Table 26 Service IDs

SERVICE ID	PRODUCT GROUP	SERVICE TYPE
21/121	Amsterdam - Equity Derivatives	Level 1+2
22/122	Amsterdam - Index Futures	Level 1+2
23/123	Amsterdam - Index Options	Level 1+2
24/124	Amsterdam - Equity Underlyings	BBO
25/125	London - Equity Derivatives	Level 1+2
26/126	London - Index Futures	Level 1+2
27/127	London - Index Options	Level 1+2
28/128	Paris - Equity Derivatives	Level 1+2
29/129	Paris - Index Futures	Level 1+2
30/130	Paris - Index Options	Level 1+2
31/131	Brussels - Equity & Index Derivatives	Level 1+2
32/132	Lisbon - Equity & Index Derivatives	Level 1+2
33/133	STIR Futures	Level 1+2
34/134	STIR Options	Level 1+2
35/135	Bond Derivatives & Swapnote®	Level 1+2
36/136	Currency Derivatives	Level 1+2
6	Commodity Derivatives	Level 1+2

A.3   TIMELINE OF EVENTS FOR PRODUCTION

The NextHistory Trades and Quotes data files for derivatives exchanges are produced according to the following Asset (Product) Groups:

■   Fixed Income Derivatives (close approx 21:30)

■   Equity Derivatives (close approx 21:30)

■   Index Derivatives (close approx 21:30)

■   Commodity Derivatives (close approx 17:30)

The full production timeline is as follows:

Table 27 Production Timeline

SYSTEM TIME (LOCAL UK TIME)	ACTION
00:05	Download the FIXML reference data files
00:15	Feed Handler Started (Equities [ei], Commodities [comm], Fixed Income [fi])
18:00	Feed Handler for commodities stopped
18:10	Data Quality Reports for commodities

SYSTEM TIME (LOCAL UK TIME)	ACTION
18:20	FTP transfers/plumbing of commodities Trades and Quotes files
21:30	Feed Handlers for Equity and Indices and Fixed Income stopped
21:40	Data Quality Reports for Equity and Indices
21:41	Data Quality Reports for Commodity Derivatives
21:50	FTP transfers/plumbing for indices
21:51	FTP transfers/plumbing for equities
21:52	FTP transfers/plumbing for fixed income
23:50	Log archiving and clearing

A.4   FIELD VALUES SPECIFIC TO NEXTHISTORY TRADES AND QUOTES DERIVATIVES

The following table describes field values that are specific to Liffe London and Euronext derivatives markets. This is a subset of all the fields available and applies to all data types.

Table 28 NextHistory Trades and Quotes Derivatives Field Values

FIELD	TYPE	DESCRIPTION
ExchangeCode	Alphanumeric	■ L – LIFFE Financials ■ O – LIFFE Equities ■ X – LIFFE Commodities ■ B – Derivative Products on Euronext Brussels Equities ■ F – Derivative Products on Euronext Brussels Indices ■ E – Derivative Products on Euronext Paris Fixed Income ■ J – Derivative Products on Euronext Paris Indices ■ P – Derivative Products on Euronext Paris Equities ■ Y – Derivative Products on Euronext Paris Commodities ■ S – Derivative Products on Euronext Lisbon Equities ■ M – Derivative Products on Euronext Lisbon Indices ■ A – Derivatives Products on Euronext Amsterdam Equities ■ K – Derivatives Products on Euronext Amsterdam Indices ■ Z – Derivatives Products on Euronext Amsterdam Currency

FIELD	TYPE	DESCRIPTION
		■ R – Derivatives Products on Euronext Amsterdam Agricultural
		■ C – Paris Underlyings
		■ D – Brussels Underlyings
		■ G – Amsterdam Underlyings
		■ H – Lisbon Underlyings
InstrumentType	Alphanumeric	■ F – Future
		■ O – Option
		■ S – Stock
		■ U – Underlying
		■ I – Index
		■ X – Exchange Rate
InstrumentTrading Symbol	Alphanumeric	Contract identifier, for example VOD=Vodafone, I=Euribor.
InstrumentClearing Symbol	Alphanumeric	For example, VOD=Vodafone where VOD, VOF, VOQ, VOX, VOU are all Instrument Trading Symbols for Vodafone instruments cleared as a single instrument / symbol.
Exchange InstrumentID	Alphanumeric	Trading symbol, AMR (Automated Market Reference).
ActualExercisePrice	Floating Point	The following formula is used to calculate the Actual Exercise Price for derivatives instruments: The Decimal Locator splits the exercise price into two parts, known as the "points" and the "ticks" parts of the price. The "points" part is the integer part of the strike; the "ticks" part is divided by the strike denominator to get the fractional part. ■ E – Exercise price ■ L – Exercise price decimal locator ■ D – Exercise price denominator ■ P – "points" value of strike = INT($E/10^L$) (Note: truncated, not rounded) ■ T = "ticks" value of strike = $E \bmod 10^L$ Actual Exercise price = $P + T/D$.
StrategyMarketCode	Alphanumeric	■ A – Jelly Roll

FIELD	TYPE	DESCRIPTION
		■ B – Butterfly
		■ C – Call or Put Cabinet
		■ D – Spread
		■ E – Calendar Spread
		■ F – Diagonal Calendar Spread
		■ G – Guts
		■ H – Two by One Ratio Spread
		■ I – Iron Butterfly
		■ J – Combo
		■ K – Strangle
		■ L – Ladder
		■ M – Strip
		■ N – Straddle Calendar Spread
		■ O – Pack
		■ P – Diagonal Straddle Calendar Spread
		■ Q – Simple Inter Commodity Spread
		■ R – Conversion / Reversal
		■ S – Straddle
		■ U – Inter Commodity Spread
		■ V – Volatility Trade
		■ W – Condor
		■ X – Box
		■ Y – Bundle
		■ Z – Reduced Tick Spread
		■ a – Ladder versus Underlying
		■ b – Butterfly versus Underlying
		■ c – Call Spread versus Put versus Underlying
		■ d – Call or Put Spread versus Underlying
		■ e – Call or Put Calendar Spread versus Underlying
		■ f – Call/Put Diagonal Calendar Spread versus Underlying
		■ g – Guts versus Underlying

FIELD	TYPE	DESCRIPTION
		■ h – Two by One Call or Put Ratio Spread versus Underlying
		■ i – Iron Butterfly versus Underlying
		■ j – Combo versus Underlying
		■ k – Strangle versus Underlying
		■ n – Straddle Calendar Spread versus Underlying
		■ p – Put Spread versus Call versus Underlying
		■ q – Diagonal Straddle Calendar Spread versus Underlying
		■ r – Synthetic
		■ s – Straddle versus Underlying
		■ t – Condor versus Underlying
		■ u – Buy Write
		■ v – Iron Condor versus Underlying
		■ w – Iron Condor
		■ x – Call Spread versus Sell a Put
		■ y – Put Spread versus Sell a Call
		■ z – Put Straddle versus Sell a Call or a Put
CalculationType	Alphanumeric	INT – Interest Rate index. STD – normal, money per unit of physical.
PriceFormat	Alphanumeric	Not provided for Liffe London or Euronext derivatives
PriceUnitType	Floating Point	Not provided for Liffe London or Euronext derivatives
NumberOfShares	Integer	Not provided for Liffe London or Euronext derivatives
ICBClassification	Integer	Not provided for Liffe London or Euronext derivatives
UpdateType	Alphanumeric	■ 1 – Best Bid ■ 2 – Best Offer ■ 3 – Bid ■ 4 – Offer ■ 5 – Total Traded Volume

FIELD	TYPE	DESCRIPTION
		■ 6 – Conventional Trade
		■ 7 – Block Trade
		■ 8 – Basis Trade
		■ 9 – Prof Trade
		■ 10 – Guaranteed Cross Trade
		■ 11 – Against Actual Trade
		■ 12 – Asset Allocation Trade
		■ 13 – External Match Trade
		■ 14 – Exchange For Swap Trade
		■ 15 – Exchange For Physical Trade
		■ 17 – Implied Bid
		■ 18 – Implied Offer
		■ 19 – Indicative Open Price
		■ 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
		■ 39 – Bclear Trade
TradeID	Alphanumeric	Not provided for derivatives exchanges.
MarketIdCode	Alphanumeric	■ XLIF – London
		■ XMAT – Paris (MATIF)
		■ XMON – Paris (MONEP)
		■ XBRD – Brussels
		■ MFOX – Lisbon
		■ XEUE – Amsterdam

APPENDIX B: EXCHANGE-SPECIFIC INFORMATION – EURONEXT CASH

B.1   (NORMALISED) UPDATES TYPES –EURONEXT CASH

The following table describes the normalised update types for Euronext Cash.

Table 29 Normalised Update Types –Euronext Cash

UPDATE TYPE	MEANING	NYSE UPDATE TYPE
0	TradeCreation message, TradCond3 field: This is an on-book automatic trade.	ECT (ExchangeContinuous)
1	TradeCreation message, TradCond3 field: This is an on-book cross trade.	ECR (ExchangeCross)
3	TradeCreation message: This is an on-book basket cross trade.	ECR (ExchangeCross)
4	Valuation trade. This applies only to certain instrument types in very specific conditions and is not an actual trade – it is a price indication.	OTH (Other)
146	Retail Matching Facility quote message	BB (Bid) BO (Offer)
230	Clear Order Book	CLR
B	TCSTrade message, BlockTradeCode field: This is a block trade.	OTH (Other)
N	TCSTrade message, BlockTradeCode field: This is a regulated trade or negotiated trade.	OTH (Other)
D	TCSTrade message, TradeType field: This is a Delta-neutral former former NYSE Liffe connect off-book trade resulting from an automatic hedge of a derivative.	OTH (Other)
E	TCSTrade message, TradeType field: This is a VWAP OTC trade. VWAP trades are trades, the price of which is equivalent to the VWAP calculated over a certain period in the future.	OTH (Other)
H	TCSTrade message, TradeType field: This is an Out Of Market trade - regulated OTC trade.	OTC
I	TCS Trade message, TradeType field: This is a trade for Dutch funds, tradable only on TCS outside of the central order book.	OTC

UPDATE TYPE	MEANING	NYSE UPDATE TYPE
R	When 'NYSEMarketPlaceType' = "OnExchange": Retail Matching Facility Trade message	ECT
	When 'NYSEMarketPlaceType' = "OnExchangeOffBook" or "OffExchange": TCS Trade message, TradeType field: This is a secondary listing place trade.	OTC
O	TradeCreation message, OpeningTradeIndicator field: This is an on-book opening trade.	EAT (ExchangeAuction)

B.2   EURONEXT XDP EUROPEAN CASH FEED SERVICE IDS

The following different multicast groups (known as Service IDs) are made available and are defined as described in the table below.

Table 30 Service IDs

SERVICE ID	MULTICAST CONTENT
'101'	Euronext Equities – Reference Data
'102'	Euronext Equities – Trades
'103'	Euronext Equities – Quotes
'104'	Euronext Equities – Orders
'105'	Euronext Warrants – Trades
'106'	Euronext Warrants – Quotes
'107'	Euronext Indices – Composition and Values
'108'	European Stocks (Off Exchange Trade Reporting) – Reference Data
'109'	European Stocks (Off Exchange Trade Reporting) – Trade Reporting
'110'	Luxembourg Stock Exchange
'114'	NYSE Arca Europe
'115'	BondMatch

B.3   TIMELINE OF EVENTS FOR PRODUCTION

The full production timeline is as follows:

Table 31 Production Timeline

EVENT	TIME (CET)	COMMENT
Application Start-up	~ 06:10	

EVENT	TIME (CET)	COMMENT
Reference Data Sent	~ 06:11	
Order Book Retransmission	~ 06:20	Retransmission of outstanding orders and associated messages from the previous day.
Open (all European markets)	~ 09:00	
Close (Paris, Amsterdam, Brussels equities/warrants)	17:40	To include closing auction and TAL phases.
Close (Lisbon Warrants)	18:30	
Close (all indices)	~ 20:00	Manual action
Reference Data Sent	Between 20:00 and 21:00	Manual action
Application close down	23:00	**It should be noted that the close down of the application depends on the dissemination of the end-of-day Reference Data. The end of day Reference Data is mandatory, therefore If it is delayed for any reason, the application close down will be delayed until it is disseminated to customers.** Customers can use the 551 End Reference Data message to know there will be no more market data disseminated for a trading day.

B.4   FIELD VALUES SPECIFIC TO EURONEXT XDP EUROPEAN CASH FEED

The following table shows field values that are specific to the Euronext XDP European Cash Feed. This is a subset of all the fields available and applies to all data types.

Table 32 Euronext XDP European Cash Feed Field Values

FIELD	TYPE	DESCRIPTION
TypeOfMarket Admission	Alphanumeric	Indicates the type of market to which a security has been listed. Valid values are: ■ 'A' – Instruments traded on the primary market ■ 'B' – Instruments traded on the secondary market ■ 'C' – Instruments traded on the New Market ■ 'D' – Non regulated market / instruments traded on the free market ('Marché Libre') ■ 'E' – Non regulated market / Alternext

FIELD	TYPE	DESCRIPTION
		■ 'F' – Non listed
		■ 'G' – Regulated Market / Non equities
		■ 'H' – Regulated Market / Equities / Segment A
		■ 'I' – Regulated Market / Equities / Segment B
		■ 'J' – Regulated Market / Equities / Segment C
		■ 'K' – Regulated Market / All securities / Special Segment
		■ 'L' – Regulated Market / Equities / Other instruments
		■ 'S' – OPCVM, SICOMI non listed (French Investment Funds)
		■ '6' – Off Market
		■ '7' – Gold, Currencies, and Indices of Euronext
		■ '9' – Foreign
TypeOfCorporateEvent	Alphanumeric	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. The data item is automatically calculated by the adjustment application but in case of problem or error, the data item value could be modified manually, particularly for purging the order book in case of absence of corporate event. This data has to be treated in consideration of the date of the event included into the header of the message. Valid values are: ■ '00' – No specific event ■ '01' – Dividend payment in cash or in stocks ■ '02' – Interest payment (bonds for which the price is not expressed in % of the nominal, only) ■ '04' – Split ■ '05' – Bonus (i.e. attribution) ■ '06' – Subscription ■ '07' – Share allocation ■ '08' – Share swap ■ '09' – Reverse split ■ '10' – Merger ■ '11' – Final bond redemption

FIELD	TYPE	DESCRIPTION
		■ '12' – Capital amortization
		■ '13' – Draw announcement (Belgian bonds only)
		■ '14' – Block trade of controlling interest
		■ '15' – Optional corporate events (dividend Option)
		■ '16' – Complex corporate event
		■ '17' – Purge of the order book (purge is initiated manually in the absence of a corporate event, for example, following the modification of the variable tick of the listed security)
MarketFeedCode	Alphanumeric	The "Market data flow" to which the instrument belongs. Possible values are listed in Market Feed Code.
FinancialMarketCode	Alphanumeric	For details of what market each possible code can refer to, see Financial Market Code.
ExchangeCode	Alphanumeric	Indicates the Market Place. For a description of which exchange each of the possible codes refers to, see Stock Exchange Code.
InstrumentType	Alphanumeric	See Stock Type.

B.5   MARKET FEED CODE

MARKET	CODE	CONTENT
	00	None Applicable
	CC	Technical message
	61	Volatility Indices
	62	Strategic indices
Euronext Paris	01	CAC40 stocks (equities) that support traded Options + Euronext 100 index and Euronext 150 index
	02	CAC40 stocks that do not support traded Options.
	03	Non-CAC40 stocks that support traded Options.
	04	Non-CAC40 stocks that do not support traded Options.
	05	Non-CAC40 stocks that support traded Options (same as 03)
	06	Non-CAC40 stocks that do not support traded Options.
	07	Bonds.
	10	Free market ("Marché Libre")

MARKET	CODE	CONTENT
	11	Securities in process of being introduced (SHIVA).
	12	Gold.
	13	Foreign exchange.
	15	Centralized lending market
	16	Commercial paper
	60	ETF Securities (Exchange traded fund)
Euronext Brussels	20	Stock listed in Brussels
	21	Bonds listed in Brussels
	22	Brussels Index constituents
	23	Warrants listed in Brussels
Euronext Amsterdam	30	Stocks listed in Amsterdam
	31	Bonds listed in Amsterdam
	32	Amsterdam Index constituents
	33	Warrants listed in Amsterdam
Euronext Lisbon	40	Equities, Rights and Investment Funds listed in Lisbon
	41	Bonds and Certificates listed in Lisbon
	42	PSI-20 equities listed in Lisbon
	43	Warrants listed in Lisbon
Euronext London	18	Equities and GDR
	19	Bonds and Bonds convertible / exchangeable
	14	Warrants
Luxembourg	50	Stocks listed in BDL
	51	Bonds listed in BDL
	52	Corporate Bonds listed in BDL
	53	Warrants listed in BDL (bilateral clearing / settlement)
	54	Indices listed in BDL
	55	OPCs listed in BDL (bilateral clearing / settlement)
	56	Bonds listed in BDL (bilateral clearing / settlement)
	57	Stocks listed in BDL (European regulated market)
European Instruments	65	European stocks (Trade publication purpose)

B.6 FINANCIAL MARKET CODE

CODE	CONTENT
000	None applicable
025	Paris
277	Centralized lending market
278	Brussels
279	Amsterdam
290	Lisbon
292	London
295	Luxembourg
299	Europe
300	Commercial paper

B.7 STOCK EXCHANGE CODE

CODE	CONTENT
000	Not applicable
006	BRUXELLES
025	PARIS
027	LYON
028	MARSEILLE
029	NANCY
030	BORDEAUX
031	NANTES
032	LILLE
038	AMSTERDAM
047	LUXEMBOURG
051	LISBON
726	LONDON
991	EUROPEAN STOCK

B.8 STOCK TYPE

CODE	STOCK TYPE
008	Participating bond-Cum-warrant

CODE	STOCK TYPE
009	Participating bond-Ex-warrant
010	Participating share
011	Subordinated bond
013	Interest strip
014	Principal strip
015	Perpetual
017	Bunny bond
018	ORT (France)
019	OAT Fungible government bond
021	Convertible bond
022	Exchangeable bond
023	Participating bond
024	Indexed bond
025	Ordinary bond or note
026	Lottery bond
027	Savings bond
028	Indemnity bond
030	Bond warrant
032	Bond Cum-warrant
033	Bond Ex-warrant
035	Right to indemnity security
038	Bond Option
039	Emprunt notionnel (France)
040	Founder's share
041	Ordinary share
042	Bonus share
043	Preferred share
044	Saving share
045	Certificate
046	AFV share (Belgium)

CODE	STOCK TYPE
047	Accumulating right
048	Allotment right
049	Subscription right
050	Preferred stock
051	VVPR share (Belgium)
052	Certificate of deposit
053	Cash note
054	Allocation right
055	Option right
056	Share-Cum warrant
057	Share-Ex warrant
058	Preference share
059	Preference
060	Gold
061	Unit of international investment trust
062	Unit of unit trust
063	Mortgage warrant
064	Bank note
065	Devise commerciale (France)
066	Devise titre (France)
067	Commodities
068	Index
069	Unit
070	Investment fund share
071	Miscellaneous products-Warrant
072	Share warrant
075	Miscellaneous
076	Listed call Option
077	Listed put Option
078	Call money, average BD rate

CODE	STOCK TYPE
080	Founder's stock
081	Partnership interest
082	Part de réserve (Belgium)
084	Deferred share
085	Regional development company share
086	Venture capital company
087	Real estate company share
090	Mortgage bond
100	Participation certificate
105	Index warrant
106	Currency warrant
108	Warrant of a warrant
110	Participating share-Warrant
111	Subordinated convertible bond
121	Convertible bond-Cum warrant
123	Convertible participating bond
139	Matif 90 days treasury bond
140	Part de réserve AFV (Belgium)
141	Convertible ordinary share
142	Dividend right certificate
144	Convertible saving share
145	Investment certificate-Warrant
150	Convertible preference share
162	MBO share
200	Participative certificate-Warrant
221	Convertible bond-Ex warrant
240	AFV company's share (Belgium)
241	VVPR's company's share (Belgium)
242	Accumulation fund share
243	Distribution fund share

CODE	STOCK TYPE
244	Unit-Futures and Options market investment fund
245	Accumulation fund share
246	Distribution fund share
247	Certificate of guaranteed value
248	Share warrant
249	BTAN (France)
250	OAT (France)-Interest certificate
251	OAT (France)-Principal certificate
252	Indexed OAT (France)
253	Indexed OAT (France)-Principal certificate
254	Indexed OAT (France)-Interest certificate
255	Euro Medium Term Note (EMTN)
256	BTF (France)
257	Indexed certificate
258	BMTN (France)
259	Real estate bond
260	Convertible EMTN
261	Indexed EMTN
262	Indexed certificate-EMTN
263	Exchange Traded fund-ETF
264	Venture Cap. mutual fund share
265	Mutual fund for innovation share
266	Medium Term Note
267	Medium Term Note-Floating rate
268	Accumulating share
269	Distribution share
270	Ordinary bond-Interest certificate
271	Ordinary bond-Principal certificate
272	'Beneficial interest' share
273	Redeemable cumulative preferred share

CODE	STOCK TYPE
274	Convertible redeemable cumulative preferred share
275	Convertible cumulative preferred share
276	Cumulative preferred share
277	Redeemable preferred share
278	Foreign treasury note
279	Subordinated Euro medium term note
280	Strip VVPR
281	Mortgage Bonds
303	Exotic warrant
304	Certificate of deposit
305	Commercial paper
306	ETF – Closed ended Fund
307	ETF – Open ended Fund
308	SICAV Action
309	Preferred securities

APPENDIX C: EXCHANGE-SPECIFIC INFORMATION – NYSE ARCA EUROPE

C.1   NYSE ARCA EUROPE SERVICE IDS

The following different multicast groups (known as Service IDs) are made available and are defined as described in the table below.

Table 33 Service IDs

SERVICE ID	MULTICAST CONTENT
'114'	NYSE Arca Europe
'214'	NYSE Arca Europe – Refresh

C.2   TIMELINE OF EVENTS FOR PRODUCTION

The full production timeline is as follows:

Table 34 Production Timeline

EVENT	TIME (CET)	COMMENT
Application start-up	~ 06:10	
Referential data Sent	~ 06:11	
Order book Retransmission	~ 06:20	Retransmission of outstanding orders and associated messages from previous day
Open	~ 09:00	
Close	17:30	
Referential data Sent	Between 20:00 and 21:00	Manual action
Application close down	23:00	**It should be noted that the close down of the application depends on the dissemination of the end of day Reference Data. The end of day Reference Data is mandatory, therefore If it is delayed for any reason, the application close down will be delayed until it is disseminated to customers.** Customers can use the 551 End Reference Data message to know there will be no more market data disseminated for a trading day.

C.3   MARKET FEED CODE

MARKET	CODE	CONTENT
	00	None Applicable
	CC	Technical message
European instruments	17	NYSE Arca Europe

C.4   FINANCIAL MARKET CODE

CODE	CONTENT
302	NYSE Arca Europe

C.5   STOCK EXCHANGE CODE

CODE	CONTENT
683	NYSE ARCA EUROPE

C.6   STOCK TYPE

See Stock Type.

APPENDIX D: EXCHANGE-SPECIFIC INFORMATION – BONDMATCH

D.1   BONDMATCH SERVICE IDS

The following different multicast groups (known as Service IDs) are made available and are defined as described in the table below.

Table 35 Service IDs

SERVICE ID	MULTICAST CONTENT
'115'	BondMatch
'215'	BondMatch – Refresh

D.2   TIMELINE OF EVENTS FOR PRODUCTION

The full production timeline is as follows:

Table 36 Production Timeline

EVENT	TIME (CET)	COMMENT
Application start-up	~ 06:10	
Referential data sent	~ 06:11	
Order Book Retransmission	~ 06:20	Retransmission of outstanding orders and associated messages from previous day
Open	~ 09:00	
Close	17:30	
Referential data sent	Between 20:00 and 21:00	Manual action
Application close down	23:00	**It should be noted that the close down of the application depends on the dissemination of the end of day Reference Data. The end of day Reference Data is mandatory, therefore If it is delayed for any reason, the application close down will be delayed until it is disseminated to customers.** Customers can use the 551 End Reference Data message to know there will be no more market data disseminated for a trading day.

D.3   MARKET FEED CODE

MARKET	CODE	CONTENT
	00	None Applicable
	CC	Technical message
European instruments	25	BondMatch

D.4   FINANCIAL MARKET CODE

CODE	CONTENT
303	BondMatch

D.5   STOCK EXCHANGE CODE

CODE	CONTENT
600	BondMatch

D.6   STOCK TYPE

See Stock Type.