CLIENT SPECIFICATION

An Intercontinental Exchange Company



Document title DAILY TAQ CLIENT SPECIFICATION

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PREFACE

DOCUMENT HISTORY

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

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	07/07/2011	Approved version for release
1.0a	07/26/2011	Updated exchange codes
1.0b	07/28/2011	Added Appendix D (NYSE Industry Codes)
1.0c	12/07/2011	Updated description of "CUSIP" fields
		Updated Exchange codes
		Amended "Alternative Products" section
1.0d	02/16/2012	Added exchange codes '12' (BATS), '13' (Direct Edge A), '14' (Direct Edge X) and '15' (BATS Y)
1.1	06/13/2012	Updated references to NYSE MKT
1.2	07/24/2012	Added the 'Retail Interest Indicator (RPI)' field to the Daily Quotes table (Table 5)
		Document rebranded with new NYSE Technologies template
1.3	09/11/2012	Updated description of values for the Sale Condition field in Table 6 (Daily Trades File Data Fields)
1.4	09/20/2012	Updated description of CUSIP field values in Table 3 (Daily TAQ Master File Data Fields)
1.5	12/21/2012	Added LULD BBO Indicator(CQS), LULD BBO Indicator (UTP), FINRA ADF MPID Indicator and SSR Indicator to the BBO file
		Added LULD NBBO Indicator(CQS) and LULD NBBO Indicator (UTP) to the NBBO file. Changes applicable only to files with a .new suffix until February 1, 2013. Changes applicable to standard files from February 4, 2013.
	01/21/2013	Update to MarketMaker description for Quotes and NBBO
1.6	04/04/2013	Added new Daily Quotes Admin Message file and Daily Trades Admin Message file to the product to capture LULD Price Bands
1.7	05/10/2013	Corrected errors in Daily TAQ Master File Beta Data Fields field descriptions
	05/16/2013	Minor change to field naming in Master file description
	06/03/2013	Added section with link to previous versions.
	08/06/2013	Clarification on Trade, Quote and NBBO timestamps. Updated UTP Sale Condition codes.
1.8	12/02/2013	Added new fields and modified existing fields, in response to Limit Up-Limit Down pilot review, to Daily Quotes, Daily Trades, Quote Admin Message and Trade Admin Message files
	12/02/2013	Changed definition of Sale Condition codes 'I' and '9' (change effective from December 9 $^{ m th}$, 2013)
1.9	01/15/2014	Amended the RECORD SIZE (BYTES) fields for TAQ Master, TAQ Quotes and TAQ NBBO in section 1.4.1. File Details
2.0	05/02/2014	Source-Listed Exchange and Symbol Compressed fields updated to align with client specification. Reference:
2.1	06/01/2015	Changed definition of Sale Condition code 'V' (change effective from July 30th 2015 to August 3 rd 2015) from Stock Option Trade to Contingent Trade. Reference: <u>https://www.ctaplan.com/index</u>

VERSIO N NO.	DATE	CHANGE DESCRIPTION
2.1	06/01/2015	Updated description of Sale Condition code '7' (change effective from July 30th 2015 to August 3 rd 2015) from Reserved to Qualified Contingent Trade. Reference: <u>https://www.ctaplan.com/index</u>
2.1	06/01/2015	 Effective change for the SIP (NMS) Consolidated Tape System (CTS) and Consolidated Quotation System (CQS) on August 3rd 2015. Effective change for the (UTP) NASDAQ on July 27th 2015: A modified Timestamp from a 9-character field for milliseconds (HHMMSSXXX) to an expanded 12 character field for microseconds (HHMMSSXXXX) on the Daily TAQ Quotes, Daily TAQ Trades, Daily TAQ NBBO, Daily TAQ Quote Admin Message LULD and Daily TAQ Trade Admin LULD Message. The inclusion in the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO of a new Participant Timestamp field, represented as a 12 character field for microseconds (HHMMSSXXXXX), that will be used by the Participants to provide the Participant Timestamp in terms of the number of microseconds since midnight Eastern Time (ET). The addition of a <i>Regional Reference Number (RRN)</i> representing the RRN transaction ID provided by the Participant on the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO. The inclusion in the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO. The inclusion in the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO. The inclusion in the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO of <i>Trade Reporting Facility (TRF)</i>, represented as a 12 character field for microseconds (HHMMSSXXXXX), will be used by the TRFs to provide the TRF Timestamp in terms of the number of microseconds since midnight Eastern Time (ET).
2.2	04/29/2016	Effective change on October 10, 2016 for UTP Binary Migration and format changes for all Daily TAQ files (Daily TAQ Master, Daily TAQ Master Beta, Daily TAQ Quotes, Daily TAQ Trades, Daily TAQ NBBO, Daily TAQ Quote Admin Message LULD, Daily TAQ Trade Admin Message LULD, Daily TAQ UTP Admin Message, Daily TAQ CTA Admin Message). The change are outlined as follows:
	04/29/2016	Consolidation of the Daily TAQ Master and Daily TAQ Master Beta files to create a new Daily TAQ Master with the inclusion of the Tick Pilot Securities Group Indicator to reflect that a security is part of the SEC Tick Pilot Program. Reference https://www.nyse.com/tick-pilot .
	04/29/2016	Inclusion of specifications for the Daily TAQ CTA Administrative Message and the Daily TAQ UTP Administrative Message files. These files provide trading administrative actions such as Opening Delay, Trading Halt, Trading Resumption, Price Indication, Financial Status Indicator, etc.
	04/29/2016	Addition of APPENDIX E: Participant ID Codes with Participant ID 'V' - The Investors' Exchange (IEX).
	04/29/2016	A format change for all Daily TAQ files (Daily TAQ Master, Daily TAQ Quotes, Daily TAQ Trades, Daily TAQ NBBO, Daily TAQ Quote Admin Message LULD, Daily TAQ Trade Admin Message LULD, Daily TAQ UTP Admin Message, Daily TAQ CTA Administrative Message from fixed length, zip uncompressed format to a pipe-delimited format compressed, using gzip.
	· ·	The revised Header Row identifies the name of each column in the file. The new Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file.
	04/29/2016	Daily TAQ files made available on a new MFT-Managed File Transfer infrastructure for current files (revolving five days' worth of data). Each file is delivered in a pipe-delimited format compressed, using gzip. Daily TAQ files made available on <u>ftp2.nyxdata.com</u> (T+3) and further back history of Daily TAQ files can be accessed from <u>ftp2.nyxdata.com</u> per customers' entitlement.
	04/29/2016	The Field Order denotes the order each field appear in each record. A Field Terminator ' n ' added to indicate the end of the record.
	04/29/2016	A modified Timestamp from a 12 character field for microseconds (HHMMSSXXXXXX) to a 15 character field for nanoseconds (HHMMSSXXXXXXX) on the Daily TAQ Master, Daily TAQ Quotes, Daily TAQ Trades, Daily TAQ NBBO, Daily TAQ Quote Admin Message LULD, Daily TAQ Trade Admin Message LULD, Daily TAQ UTP Admin Message, and Daily TAQ CTA Administrative Message. For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
	04/29/2016	The Participant Timestamp (timestamp 1) field changed from a 12 character field for microseconds (HHMMSSXXXXXX) to a 15 character field for nanoseconds (HHMMSSXXXXXXX) on the Daily TAQ Quotes, Daily TAQ Trades, Daily TAQ NBBO, Daily TAQ UTP Admin Message, and Daily TAQ CTA Administrative Message. For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
	04/29/2016	The Trade Reporting Facility (TRF) Timestamp 2 field changed from a 12 character field for microseconds (HHMMSSXXXXXX) to a 15 character field for nanoseconds (HHMMSSXXXXXXX) on the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO files. For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
	04/29/2016	On the Daily TAQ Quote file, the Trade Reporting Facility (TRF) Timestamp field renamed FINRA ADF Timestamp. See <u>CTA Specifications</u> and <u>UTP Specification</u>

	nental Exchange	Company CLIENT SPECIFICATION
VERSION NO.	DATE	CHANGE DESCRIPTION
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2.2	04/29/2016	The Bid Price and Offer Price changed in Daily TAQ files from an 11 character to a 21 character maximum field size. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Each price field excludes leading and trailing zeroes. The fields containing prices are: Daily TAQ Quotes file -Bid Price, and Offer Price Daily TAQ Trades - Trade Price, Bid Price, and Offer Price Daily TAQ NBBO file - Bid Price, Offer Price, Best Bid Price, and Best Offer Price Daily TAQ NBBO file - Bid Price, Offer Price, Best Bid Price, and Best Offer Price Daily TAQ Admin Message LULD - LULD Upper Limit Price Band, and LULD Upper Limit Price Band Daily TAQ UOTE Admin Message LULD - LULD Upper Limit Price Band, and LULD Upper Limit Price Band Daily TAQ Off A Administrative Message LULD - LURD Upper Limit Price Band, Lower Limit Price Band Daily TAQ Off A Administrative Message LUD Price, Drive Price Price Band, Lower Limit Price Band
	04/29/2016	Daily TAQ CTA Administrative Message- Upper Limit Price Band, Lower Limit Price Band The field changed for the Bid Size and Offer Size from 7 characters to 10 characters in the Daily TAQ
		Quotes, Daily TAQ Trades, and Daily TAQ NBBO files. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
		Daily TAQ Quotes and Daily TAQ Trades - Bid Size, and Offer Size Daily TAQ NBBO file- Bid Size, Offer Size, Best Bid Size, and Best Offer Size
	04/29/2016	The Message Sequence Number field changed from 16 bytes to a maximum file size of 20 characters on the Daily TAQ Quotes file, Daily TAQ Trades, Daily TAQ NBBO file, Daily Tade Admin Message LULD, Daily TAQ Quote Admin Message LULD, Daily TAQ UTP Admin Message, and Daily TAQ CTA Admin Message. For UTP, allow up to 20 characters for the Message Sequence Number. The Message Sequence Number excludes leading zeroes.
	04/29/2016	The removal of the Regional Reference Number (RRN) for CTA or Participant Token field in UTP on the Daily TAQ Quotes, Daily TAQ Trades and Daily TAQ NBBO files.
	04/29/2016	A new field, FINRA ADF Market Participant Quote Indicator, added in the Daily TAQ Quote file. It represents a quote from a single ATS in the FINRA ADF. For FINRA quotes that do not affect the NBBO or FINRA BBO, a FINRA ADF Market Participant Quotation Message Indicator will be sent. (UTP Quote Feed Only). With the removal of OTC Montage Data Feed (OMDF), FINRA ADF Participant quotes will be included in UQDF Top of book quotations for each FINRA ADF participant, disseminated on a separate data feed (OMDF). UTP data feed recipients that wish to receive the individual. Reference <u>UTP Specification</u>
	04/29/2016	The Trade Volume maximum size changed from 9 to 10 characters on the Daily TAQ Trade file. For CTA, allow up to 9 characters. For UTP, allow up to 10 characters.
	04/29/2016	For the Trade Sequence Number for UTP on the Daily TAQ Trades file, allow up to 12 characters. For CTA, allow up to 16 characters. This field excludes Leading zeroes.
	04/29/2016	The Quote Condition '4' = On Demand Intra-Day Auction added on the Daily TAQ Quotes and Daily TAQ NBBO files.
	04/29/2016	The Trade Through Exempt Indicator (TTE) added on the Daily TAQ Trade file. It denotes whether or not a trade through is exempt. When used jointly with certain Sale Conditions, the TTE will more fully describe the characteristics of a particular trade. Reference <u>CTA Specification</u> and <u>UTP Specification</u>
	04/29/2016	The Participant Listing Market Participant Identifier (PLMPID) added on the Daily TAQ Trades file. The PLMPID identifies when a participant trades a Tape B security and shows which regional exchange is the listing market.
	04/29/2016	The addition of the FINRA ADF MPID Indicator on the Daily TAQ NBBO file. If the FINRA ADF participant's BBO quotation impacts their single participant at either the Bid or Offer side of their market for the issue, a FINRA ADF MPID Appendage will be added to the original short- or long-form message. This appendage will include the ADF's single participant for its best bid and size and/or the ADF's single participant for its best offer and size. Within the Quotation message, the FINRA ADF MPID Indicator will denote the type of appendage to be included. Refer <u>UTP Specification</u>
	04/29/2016	The Best Bid MM Location (Best Bid NASDAQ Market Maker geographic location, Long Appendage) and Best Bid MM Desk Location (Best Bid NASDAQ Market Maker desk location, Long Appendage) are no longer used. These fields were removed on the Daily TAQ NBBO file. Reference <u>UTP Specification</u>
	04/29/2016	The Best Offer MM Location (Best Offer NASDAQ Market Maker geographic location, Long Appendage) and Best Offer MM Desk Location (Best Offer NASDAQ Market Maker desk location, Long Appendage) are no longer used These fields were removed on the Daily TAQ NBBO file. Reference <u>UTP Specification</u>
2.2a	7/6/2016	Added the Trade ID on the Daily TAQ Trades file as an identifier for tracking trades across corrections and cancels.
2.2a	7/6/2016	Added instructions and file directory for accessing Daily TAQ files on the MFT-Managed File Transfer Infrastructure (mftus.nyx.com) using SFTP (current last 5days worth's of data). Daily TAQ files made available on a new MFT-Managed File Transfer infrastructure for current files (revolving five days' worth of data). Each file is delivered in a pipe-delimited format compressed, using gzip. Daily TAQ files made available on ftp2.nyxdata.com (T+3) and further back history of Daily TAQ files can be accessed from ftp2.nyxdata.com per customers' entitlement.

VERSION NO.	DATE	CHANGE DESCRIPTION
2.2a	7/6/2016	A file naming convention change for Daily TAQ Quotes (BBO) file from a single file to 26 splits alphabetical files. Daily TAQ Quotes file name and location changed From: /EQY_US_ALL_BBO/EQY_US_ALL_BBO_yyy/EQY_US_ALL_BBO_yyyymm/EQY_US_ALL_BBO_yyyymmdd.zip To: MFT (Uploaded Daily): /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_[A-Z]_yyyymmdd.gz To: FTP2 (Uploaded on T+3 basis): (CPLITS_US_ALL_BPO_(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_BPO(CPLITS_US_ALL_
		/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_[A- Z]_yyyymmdd.gz Includes a .done file to indicate the last file that uploaded for that day. The content of the .done file includes the date and number of records in the total 26 alpha Split files.
2.2a	7/6/2016	Effective October 24, 2016 NYSE MKT will cease trading of Nasdaq-listed symbols when the legacy UTP SIP technology protocol is sunset.
2.2a	7/6/2016	On the Daily TAQ Quotes and NBBO files, National BBO Indicator for CTA only and the NASDAQ BBO Indicator for UTP/UTP, changed to a single field called National BBO Indicator for CTA and UTP.
2.2a	7/6/2016	On the Daily TAQ NBBO file, FINRA ADF MPID Indicator now reflect a separate field called FINRA ADF MPID Appendage Indicator for UTP and FINRA BBO (FBBO) Indicator for CTA.
2.2a	7/6/2016	The Symbol file in Daily TAQ will reflect the format of Symbol, one space, suffix. In the Daily TAQ Master file, the CTA Symbol will reflect the CTA Symbology (if source is CTA) or Nasdaq Symbology (if source is UTP).

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PRICING

<u>Historical Market Data Pricing</u>

POLICIES

Market Data Policies

NOTICES

<u>Register</u> or visit <u>https://www.nyse.com/subscriptions</u> for the receipt of product news and/or operational status notifications for all proprietary data products.

REFERENCE

- For additional information about the product, visit: <u>http://www.nyxdata.com/Data-Products/Daily-TAQ</u>
- For a full glossary, visit: <u>http://www.nyxdata.com/glossary/</u>

SAMPLE

Sample data is available at ftp.nyxdata.com/Historical%20Data%20Samples/

1.	INTRODUCTION	. 7
1.1	Markets Covered	. 7
1.2	Instruments Covered	
1.3	Dataset	
1.4	Delivery	
	File Details	
	Delivery Platforms Information	
1.5	Alternative Products	
1.6	Previous Versions of Daily TAQ Files	
1.7	Timestamp	
1.8	Symbology	
1.9	Contracts and Licensing	
2.	DAILY TAQ MASTER FILE DATA FIELDS	12
3.	DAILY TAQ QUOTE FILE DATA FIELDS	15
4.	DAILY TAQ TRADES FILE DATA FIELDS	21
5.	DAILY TAQ NBBO FILE DATA FIELDS	24
6.	DAILY TAQ QUOTE ADMIN MESSAGE LULD FILE DATA FIELDS	30
7.	DAILY TAQ TRADE ADMIN MESSAGE LULD FILE DATA FIELDS	32
8.	DAILY TAQ CTA ADMIN MESSAGE FILE DATA FIELDS	34
9.	DAILY TAQ UTP ADMIN MESSAGE FILE DATA FIELDS	39
10.	APPENDIX A: BBO QUALIFYING CONDITIONS	42
11.	APPENDIX B: NYSE STOCK SYMBOL SUFFIXES	43
12.	APPENDIX C: NASDAQ STOCK SYMBOL SUFFIXES	46
13.	APPENDIX D: NYSE INDUSTRY CODES	47
14.	APPENDIX E: PARTICIPANT ID CODES	52

1. INTRODUCTION

Daily TAQ (Trade and Quote) provides users access to all trades and quotes for all issues traded on NYSE, Nasdaq and the regional exchanges for the previous trading day. It's a comprehensive history of daily activity from NYSE markets and the U.S. Consolidated Tape covering all U.S. Equities instruments (including all CTA and UTP participating markets).

The file contains the Master File with Primary Exchange Indicator, the "NBBO file" containing continuous National Best Bid and Offer updates, and consolidated trades and quotes for all listed and non-listed issues. Historical information is available for an additional fee. Daily TAQ data reflects Trades and Quotes reported to the SIP between 4:00am-8:00pm.

1.1 MARKETS COVERED

The Daily TAQ product covers:

- All CTA Participating Markets Tapes A, B and C
- NYSE
- Nasdaq (OTC)
- All Regionals Exchanges

1.2 INSTRUMENTS COVERED

The Daily TAQ product covers Equities.

1.3 DATASET

The dataset includes:

- Daily TAQ Trades File (Daily @ 9:00 PM EST; History: 24 Apr 2002 present.) A Daily TAQ Trade file is available as a single daily file in ASCII format, pipe-delimited, and compressed using gzip. Every trade reported to the consolidated tape, from all CTA participants. Each trade identifies the time, exchange, security, volume, price, sale condition, and more. For sample data, see <u>Daily TAQ Trades File</u>. Daily TAQ Trades files are approximately 649 MB. The Daily TAQ Trades File sorted by symbol, time, and message_sequence_number.
- Daily TAQ Quotes File (Daily @ 2:00 am EST; History: 11 Apr 2002 present.) A Daily TAQ Quotes file is available in 27 separate alphabetical daily file in ASCII format, pipe-delimited, and compressed using gzip. Every quote reported to the consolidated tape, from all CTA participants. Each quote identifies the time, exchange, security, bid/offer volumes, bid/offer prices, NBBO indicator, and more. For sample data, see Daily TAQ Quotes File. Daily TAQ Quote files are approximately 17G total file size. The Daily TAQ Quotes (BBO) File sorted by symbol, time, and message_sequence_number.
- Daily TAQ Master File (Daily @ 9:00 PM EST; History: 10 Sep 2003 present.) A Daily TAQ Master file is available as a single daily file in ASCII format, pipe-delimited, and compressed using gzip. All master securities information in NYSE-listed and non-listed stocks, including Primary Exchange Indicator. For sample data, see <u>Daily TAQ Master File</u>. Daily TAQ Master files are approximately 360 KB. The Daily TAQ Master File sorted by symbol.

Note: Daily TAQ Master File Beta made available from 25 Feb 2009 - 21 Oct 2016.

Daily TAQ NBBO File (Daily @ 11:00 PM EST; History: 10 Sep 2003 – present.) A Daily TAQ NBBO file is available as a single daily file in ASCII format, pipe-delimited, and compressed using gzip. An addendum to the Daily Quotes file, containing continuous National Best Bid and Offer updates and consolidated trades and quotes for all listed and non-listed issues. For sample data, see Daily NBBO File. Daily TAQ NBBO files are approximately 2.2 GB. The Daily TAQ NBBO File sorted by symbol, time, and message_sequence_number.

Note: Daily TAQ Quotes file comprises every quote reported to consolidated tape, from all CTA and UTP participants, whilst the Daily TAQ NBBO file is an addendum to the Daily TAQ Quotes file, containing continuous National Best Bid and Offer updates, the key point being that the NBBO File is an addendum to the Quotes file and only contains additional information to those quotes that warrant it.

More specifically, the NBBO file contains appendages for specific types of quotes. If a quote in the Quotes file has a "0", "1" or "2" as it's 'National BBO Indicator' this implies no appendage is required and so it will not appear in the NBBO file. If it has a value of "4" or "6" as it's 'National BBO Indicator', then the record is applied to the NBBO file and additional fields are populated within that file (as indicated in the spec). Example: The specific value of "1" indicates "Quote contains all National BBO Information – current quote is itself the new National BBO. No National appendage is required" (as per spec). Therefore, this particular record would not be written to the NBBO file.

Daily TAQ Quote Admin Message LULD File and Daily Trade Admin Message LULD File (Daily @ 9:00 PM EST; History: 8 Apr 2013 – present) The Daily TAQ Quote Admin Message LULD File and Daily Trade Admin Message LULD File are available as a single daily file each in ASCII format, pipe-delimited, and compressed using gzip. All Limit-up/Limit-down Price Band messages published over CQS & UQDF (Daily Quote Admin Message LULD File) and CTS & UTDF (Daily Trade Admin Message LULD File). For sample data, see Daily Quote or Daily Trade Admin Message LULD Files. Each Daily TAQ Quote Admin Message LULD file and Daily TAQ Trade Admin Message LULD file is approximately 75-77 MB. The Daily TAQ Quote Admin Message LULD File and Daily Trade Admin Message LULD File sorted by time.

1.3 DATASET

Daily TAQ CTA Admin Message and Daily TAQ UTP Admin Message (Daily @ 9:00 PM EST; History: 28 Feb 2011 – present) The Daily TAQ CTA Admin Message File and Daily TAQ UTP Admin Message File are available as a single daily file each in ASCII format, pipe-delimited, and compressed using gzip. Daily TAQ CTA Admin Message provides administrative messages disseminated for CTA (National Market Systems) during the trading day. Daily TAQ UTP Admin Message provides administrative messages disseminated for UTP during the CTA (National Market Systems) during the trading day and identifiers the message. For sample data, see Daily TAQ CTA Admin Message or Daily TAQ UTP Admin Message and Daily TAQ UTP Admin Message file is approximately 70-87 MB. The Daily TAQ CTA Admin Message and Daily TAQ UTP Admin Message Files are sorted by Symbol, Time and Message sequence number.

The following is also available:

Regulation SHO Data (*History: 3 Jan 2005 - 5 Oct 2007.*) In response to SEC Regulation SHO, SRO's made Short Sale transactions data available on a monthly basis for trade dates beginning January 2005 through the pilot period ending April 2006. For short sales and Reg Sho data, see <u>NYSE Volume Summary</u> and <u>TAQ NYSE Group Short Sales</u> products for subscription and pricing.

1.4 DELIVERY PLATFORM INFORMATION

Current Daily TAQ files (revolving most recent 5 days) are available via <u>MFT-Managed File Transfer</u> infrastructure. Return the <u>MFT form</u> to <u>Sales-PDP@theice.com</u> for assignment of the new MFT credentials.

Further historical data will be provided via File Transfer Protocol (FTP).

1.4.1 FILE DETAILS

Table 1 describes the format, size and availability of the daily files.

Note: File sizes, number of rows, and file time availability are an approximation that will increase or decrease according to the day's trading volume.

FILE	FORMAT	RECORD SIZE (BYTES)	File SIZE (COMPRESSED)	NUMBER OF ROWS	FILE TIME AVAILABILITY (EST)
Daily TAQ Master	ASCII	Variable – Pipe Delimited , 251	360 KB	8,400	9pm (21:00)
Daily TAQ Quotes	ASCII	Variable – Pipe Delimited , XX	17 GB	682 million	2am (02:00)
Daily TAQ Trades	ASCII	Variable – Pipe Delimited , XX	649 MB	25 million	9pm (21:00)
Daily TAQ NBBO	ASCII	Variable – Pipe Delimited , XX	2.2 GB	114 million	11pm (23:00)
		Variable – Pipe Delimited, XX			
Daily TAQ Quote Admin Message LULD	ASCII	Deminted, XX	75 MB	6.4 million	9pm (21:00)
Daily TAQ Trade Admin Message LULD	ASCII	Variable – Pipe Delimited, XX	77 MB	6.4 million	9pm (21:00)
Daily TAQ CTA Admin Message	ASCII	Variable – Pipe Delimited, XX Variable – Pipe	70 MB	4.03 million	9pm (21:00)
Daily TAQ UTP Admin Message	ASCII	Delimited, XX	87 MB	2.4 million	9pm (21:00)

Note: Notices will be provided to customers if the Daily TAQ files are not available no later than 2am.

Product News and Operational Status notices

<u>Register</u> or visit <u>https://www.nyse.com/subscriptions</u> for the receipt of product news and/or operational status notifications for all proprietary data products.

1.4.2 Server INFORMATION

Files are placed in the directories described in **Table 2**.

Table 2 Server Path Details

File Path on the **MFT-Managed File Transfer Infrastructure (mftus.nyx.com) using SFTP** for accessing current last 5 days worth's of files.

FILE	DIRECTORY – MFT Infrastructure
Daily TAQ Master	/DAILYTAQ/EQY_US_ALL_REF_MASTER/EQY_US_ALL_REF_MASTER_yyyymmdd.gz
	<pre>/DAILYTAQ/EQY_US_ALL_REF_MASTER/EQY_US_ALL_REF_MASTER_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO Examples: /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_A_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_B_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_C_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_C_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_E_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_F_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_F_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_F_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_C_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_L_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz /DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_D_yyyymmdd.gz</pre>
	/DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_Q_yyyymmdd.gz
	/DAILYTAQ/SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyymmdd.done
Daily TAQ Trades	/DAILYTAQ/EQY_US_ALL_TRADE/EQY_US_ALL_TRADE_yyyymmdd.gz
Daily TAQ NBBO	/DAILYTAQ/EQY_US_ALL_NBBO/EQY_US_ALL_NBBO_yyyymmdd.gz
Daily TAQ Quote admin Message LULD	/DAILYTAQ/EQY_US_ALL_BBO_ADMIN/EQY_US_ALL_BBO_ADMIN_yyyymmdd.gz
Daily TAQ Trade Admin Message LULD	/DAILYTAQ/EQY_US_ALL_TRADE_ADMIN/EQY_US_ALL_TRADE_ADMIN_yyyymmdd.gz
Daily TAQ CTA Admin Message	/DAILYTAQ/EQY_US_ALL_ADMIN_CTS/EQY_US_ALL_ADMIN_CTS_yyyymmdd.gz
Daily TAQ UTP Admin Message	/DAILYTAQ/EQY_US_ALL_ADMIN_UTP/EQY_US_ALL_ADMIN_UTP_yyyymmdd.gz

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Table 2 Server Path Details

FTP Instructions for accessing <u>only</u> **historical Daily TAQ files using FTP** (<u>ftp2.nyxdata.com</u>). Daily TAQ files made available on <u>ftp2.nyxdata.com</u> (T+3) basis. Also, further back history of Daily TAQ files can be accessed from <u>ftp2.nyxdata.com</u> per customers' entitlement.

FILE	DIRECTORY – FTP Platform
Daily TAQ Master	/EQY_US_ALL_REF_MASTER/EQY_US_ALL_REF_MASTER_yyyy/EQY_US_ALL_REF_MASTER_yyyymm/EQY_US_ALL_REF_ MASTER_yyyymmdd.gz
Daily TAQ Quotes	SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymm
	Examples: /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_A_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_C_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_D_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_D_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_F_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_F_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_F_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_H_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_H_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_Jyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_H_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_M_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_M_yyyymndd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_N_yyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymn/SPLITS_US_ALL_BBO_N_yyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_N_yyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_N_yyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_N_yyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_Yyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyy/SPLITS_US_ALL_BBO_yyyymm/SPLITS_US_ALL_BBO_Yyyymmdd,gz /SPLITS_US_ALL_BBO/SPLITS_US_ALL_BBO_yyyY/SPLITS_US_ALL_
Daily TAQ Trades	/EQY_US_ALL_TRADE/EQY_US_ALL_TRADE_yyyy/EQY_US_ALL_TRADE_yyyymm/EQY_US _ALL_TRADE_yyyymmdd.gz
Daily TAQ NBBO	/EQY_US_ALL_NBBO/EQY_US_ALL_NBBO_yyyy/EQY_US_ALL_NBBO_yyyymm/EQY_US_ALL_NBBO_yyyymmdd.gz
Daily TAQ Quote admin Message LULD	/EQY_US_ALL_BBO_ADMIN/EQY_US_ALL_BBO_ADMIN_yyyy/EQY_US_ALL_BBO_ADMIN_yyyymm/EQY_US_ALL_BBO_ADMIN_ yyyymmdd.gz
Daily TAQ Trade Admin Message LULD	/EQY_US_ALL_TRADE_ADMIN/EQY_US_ALL_TRADE_ADMIN_yyyy/EQY_US_ALL_TRADE_ADMIN_yyyymm/EQY_US_ALL_ TRADE_ADMIN_yyyymmdd.gz
Daily TAQ CTA Admin Message	/EQY_US_ALL_ADMIN/EQY_US_ALL_ADMIN_yyyy/EQY_US_ALL_ADMIN_yyyymm/EQY_US_ALL_ADMIN_CTS_yyyymmdd.gz
Daily TAQ UTP Admin Message	/EQY_US_ALL_ADMIN/EQY_US_ALL_ADMIN_yyyy/EQY_US_ALL_ADMIN_yyyymm/EQY_US_ALL_ADMIN_UTP_yyyymmdd.gz

1.5 ALTERNATIVE PRODUCTS

For details of related TAQ products and the full range of TAQ offerings, please refer to the Historical Data Products section of NYXData at: <u>http://www.nyxdata.com/Data-Products</u> or <u>http://www.nyxdata.com/Data-Products/Filter-and-Search-Data-Products</u>

Email: <u>Sales-PDP@theice.com</u>

1.6 PREVIOUS VERSIONS OF DAILY TAQ FILES

The previous specifications, named in accordance with the periods to which they apply, are available at <u>Market Data Technical</u> <u>Data Documents</u> for Daily TAQ and Monthly TAQ. Specifically, there are various versions of Daily TAQ specifications available at <u>Daily TAQ Specification Documents</u>

1.7 TIMESTAMP

- For UTP, Nasdaq, timestamps represented nanoseconds since Epoch as of October 24, 2016-onwards.
- For Consolidated Tape System (CTS) and Consolidated Quotation System (CQS), the microsecond timestamps since midnight Eastern Time (ET) with three trailing zeroes as of October 24, 2016)-onwards.
- Daily TAQ presented in microseconds timestamp for the SIP (NMS) for Consolidated Tape System (CTS) and Consolidated Quotation System (CQS) as of August 3, 2015-present.
- Daily TAQ microseconds timestamp for the (UTP) NASDAQ as of July 27, 2015-present.
- Daily TAQ presented in the milliseconds timestamp from October 2003 July 31, 2015 for the SIP (NMS) for Consolidated Tape System (CTS) and Consolidated Quotation System (CQS).
- For UTP, Daily TAQ milliseconds timestamp as of October 2003-July 24, 2015.
- Daily TAQ (formerly Monthly TAQ) present in non-milliseconds timestamp format from Jan 1993-Sept 2003.

1.8 SYMBOLOGY

All symbols are expressed in NYSE Symbology. The complete specification can be found here

Test Symbols are included in the Daily TAQ files.

1.9 CONTRACTS AND LICENSING

Customers must execute the appropriate agreement (Exhibit A and/or NYSE Vendor Agreement) which will be generated upon submission of the online order from the product page for each product on the NYXdata website. Upon the approval, NYSE will issue the credentials for accessing the data. Please allow up to an hour for newly purchased data product(s) from the MFT-Managed File Transfer directory setup to complete. Customers may download the data once and place the data on their internal database for internal users to access the data.

2. DAILY TAQ MASTER FILE DATA FIELDS

Table 3 describes the data fields available in the TAQ Master File. Daily TAQ Master file contains securities information in NYSE-listed and non-listed stocks, including Primary Exchange Indicator. Daily TAQ Master File sorted by symbol. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table.

Table 3 Daily TAQ Master File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Symbol	1	16	Text	Stock symbol (symbol root space suffix) for UTP and CTA.
Security Description	2	500	Text	Name of listing. Full name/Security short description
CUSIP	3	9	Text	S&P's CUSIP security identifier for the given security.
Security Type	4	3	Text	 Identifies the type of the security: A = Common Stock B = Preferred Stock C = Warrant D = Rights E = Corporate Bond ETF = Exchange Traded Fund (all Nasdaq and BATS listed ETPs will have ETF as a default code) ETN = Exchange Traded Note G = Structured Product H = ADR Common I = ADR Preferred J = ADR Warrants K = ADR Rights P = Fund Q = Basket R = Unit S = Liquidating Trust U = Unknown
CTA Symbol	5	16	Text	Identifies the Security Symbol generated from the (SIP) Securities Information Processor for UTP and CTA securities. <u>UTP Symbols</u> presented in a compressed format, see <u>here</u> . For CTA, reference <u>Appendix G</u> and pages 123 in the <u>CTA</u> <u>Specifications</u> for the list of allowable symbol suffixes.
Old Symbol	6	16	Text	 Indicates the previous symbol if a symbol has changed. The Old Symbol appears only the day new symbol becomes effective on a symbol change. Symbol root space Suffix. BLANK = No Old Symbol not provided
Test Symbol Flag	7	1	Text	 Indicates if the security is a test symbol and not an actual tradable security. These test symbols are the same as the symbols used for CTA feeds: Y = Test symbol N = Not A test symbol
Listed Exchange	8	1	Text	Listing exchange of the security. Primary Listing Market codes and description. Refer to Appendix E, Participant ID for codes
Таре	9	1	Text	Tape A, B or C
-	10	1	Numeric	Minimum size that a trade is executed. The number of shares that the security trades in. \bullet '0'=100 \bullet '1'=50 \bullet '3'=10 \bullet '4'=1
Round Lot	11	5	Numeric	The number of shares the security quotes at. Typically 100 shares of stock or any number of shares that is a multiple of 100.
NYSE Industry Code	12	4	Text	The issue's industry code; see Appendix D, NYSE Industry Codes. NYSE Proprietary Industry Code. Applies only to NYSE Group Listed securities (NYSE, NYSE MKT and NYSE Arca). Default as <blank> for the remaining securities.</blank>
Shares Outstanding	13	10	Numeric	Issue's shares outstanding. Total number of shares outstanding for the current day (value reflected in million). (A whole or decimal portion with no trailing or leading zeroes.)

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Halt Delay Reason	14	1		Denotes the reason for the Opening Delay or Trading Halt. Reason for the trading status of a security. CTA D = News dissemination I = Order Imbalance M = Limit Up-Limit Down (LULD) Trading Pause P = News Pending X = Equipment changeover Y = Sub-Penny Halt I = Market-Wide Circuit Breaker Level 1 – Breached 2 = Market-Wide Circuit Breaker Level 2 – Breached 3 = Market-Wide Circuit Breaker Level 3 – Breached Blank = Reason Not Available UTP A = Halt News Pending B = Halt News Pending B = Halt News Dissemination C = Single Stock Trading Pause In Affect D = Regulatory Halt Extraordinary Market Activity E = Halt ETF F = Trading Halted; For information requested by NASDAQ G = Halt Non Compliance H = Halt FTF I = Halt SEC Trading Suspension J = Halt Regulatory Concern K = Operations Halt, Contact Market Operations L = IPO Issue not yet Trading M = Corporate Action N = Quotation Not Available O = Volatility Trading Pause – Straddle Condition Q = News and Resumption Times R - Single Stock Trading Pause/Quotation-Only Period S = Qualifications Issues Reviewed/Resolved; Quotations/Trading to Resume T = Filing Requirements Satisfied/Resolved; Quotations/Trading To Resume V = Qualifications Halt Concluded; Filings Met; Quotes/Trades Resume U = Issuer News Not Forthcoming; Quotations/Trading To Resume V = Qualifications Halt Concluded; Filings Met; Quotes/Trades Resume V = Qualifications Halt Concluded; Filings Met; Quotes/Trades Resume U = Lissuer News Not Forthcoming; Quotations/Trading To Resume V = Qualifications Halt Concluded; Filings Met; Quotes/Trades Resume V = New Issue Available R1 Issue Available Z = IPO security released for quotation I = Market Wide Circuit Breaker Halt - Level I 2 = Market Wide Circuit Breaker Halt - Level I 3 = Market Wide Circuit Breaker Halt - Level I 3 = Market Wide Circuit Breaker Halt
Specialist Clearing Agent	15	4	Text	Specialist Clearing Firm (NYSE, NYSE MKT). Default as <blank> for the remaining securities.</blank>
Specialist Clearing Number	16	4	Numeric	Specialist Clearing Number (if applicable) for NYSE and NYSE MKT. Default as <blank> for the remaining securities.</blank>
Specialist Post Number	17	2	Numeric	Specialist identifier. Post (NYSE, NYSE MKT) where the security trades. Default as <blank> for the remaining securities.</blank>
Specialist Panel	18	2	Text	NYSE floor trading location within the post when the security trades. Default as <blank> for the remaining securities.</blank>

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
TradedOnNYSEMKT	19	1	Numeric	Did the issue trade on the NYSE MKT today: ■ '0' = No ■ '1' = Yes
TradedOnNASDAQ BX	20	1	Numeric	Did the issue trade on the NASDAQ BX Stock Exchange today: • '0' = No • '1' = Yes
TradedOnNSX	21	1	Numeric	Did the issue trade on the National Stock Exchange (NSX) today: • '0' = No • '1' = Yes
TradedOnFINRA	22	1	Numeric	Did the issue trade on the Financial Industry Regulatory Authority (FINRA) today: \bullet '0' = No \bullet '1' = Yes
TradedOnISE	23	1	Numeric	Did the issue trade on the International Securities Exchange (ISE) today: • '0' = No • '1' = Yes
TradedOnEdgeA	24	1	Numeric	Did the issue trade on the Direct Edge A Stock Exchange today: ■ '0' = No ■ '1' = Yes
TradedOnEdgeX	25	1	Numeric	Did the issue trade on the Direct Edge X Stock Exchange today: • '0' = No • '1' = Yes
TradedOnCHX	26	1	Numeric	Did the issue trade on the Chicago Stock Exchange (CHX) today: \bullet '0' = No \bullet '1' = Yes
TradedOnNYSE	27	1	Numeric	Did the issue trade on the New York Stock Exchange (NYSE) today: ■ '0' = No ■ '1' = Yes
TradedOnArca	28	1	Numeric	Did the issue trade on the NYSE Arca today: • '0' = No • '1' = Yes
TradedOnNasdaq	29	1	Numeric	Did the issue trade on Nasdaq today: ■ '0' = No ■ '1' = Yes
TradedOnCBOE	30	1	Numeric	Did the issue trade on the Chicago Board Options Exchange (CBOE) today: ■ '0' = No ■ '1' = Yes
TradedOnPSX	31	1	Numeric	Did the issue trade on the NASDAQ Price-Size Exchange (PSX) today: ■ '0' = No ■ '1' = Yes
TradedOnBATSY	32	1	Numeric	Did the issue trade on the BATSY today: ■ '0' = No ■ '1' = Yes
TradedOnBATS	33	1	Numeric	Did the issue trade on the BATS Exchange today: ■ '0' = No ■ '1' = Yes
TradedOnIEX	34	1	Numeric	Did the issue trade on The Investors' Exchange (IEX) today: ■ '0' = No ■ '1' = Yes
Tick Pilot Indicator	35	1	Text	 Tick Pilot Securities Group C = Control Group - business as usual (\$0.01 increments) 1 = Group 1 Pilot securities in the first test group quoted in \$0.05 increments; trading is business as usual. 2 = Group 2 - Pilot securities in the second test group quoted in \$0.05 increments; trade in \$0.05 increments except for midpoint liquidity and retail orders. 3 = Group 3 - Pilot securities in the third test group quote in \$0.05 increments; trade in \$0.05 increments; protection is provided to displayed liquidity over dark liquidity at the same price, known as the "trade at" rule. Blank = Not applicable (not part of tick pilot data gathering) Reference <u>https://www.nyse.com/tick-pilot</u>

3. DAILY TAQ QUOTES FILE DATA FIELDS

Table 4 describes the data fields available in the Daily TAQ Quotes File. Daily TAQ Quotes file is available in 26 Splits alphabetical daily files in pipe-delimited format, using gzip. Every quote reported to the consolidated tape, from all CTA participants. Each quote identifies the time, exchange, security, bid/offer volumes, bid/offer prices, NBBO indicator, and more. The Daily TAQ Quotes (BBO) file sorted by symbol, time, and message_sequence_number. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table. **Table 4 Daily Quotes File Data Fields**

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Time	1	15	Time (HHMMSSXXXXXXXXX)	Time the quote was published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Exchange	2	1	Text	The Exchange that issued the quote: Refer to Appendix E, Participant ID for codes
Symbol	3	16	Text	Security symbol (six-character root, space, ten- character suffix)
Bid Price	4	21	Numeric	Represents the highest price a prospective buyer is prepared to pay at a particular time for a security. Bid Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. Allow For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
Bid Size	5	10	Numeric	Bid size in units of trade, ten characters. Identifies the number of round-lots, for a security. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
Offer Price	6	21	Numeric	Represents the lowest price acceptable to a prospective seller at a particular time for a security. Offer Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
Offer Size	7	10	Numeric	Offer size in units of trade, ten characters. Identifies the number of round-lots, for a security. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
Quote Condition	8	1	Text	 Denotes a particular condition applicable to the quote. Determines whether a quote qualifies for the Best Bid and Best Offer calculation. Condition of Quote issued: 'A' = Slow on the Offer Side 'B' = Slow on the Bid Side 'C' = Closing 'D' = News Dissemination 'E' = Slow Quote on the Bid due to LRP or GAP Quote 'F' = Slow Quote on the Offer due to LRP or GAP Quote 'G' = Trading Range Indication 'H' = Slow Quote on the Bid and Offer Sides 'I' = Order Imbalance 'J' = Due to a Related Security – News Dissemination 'K' = Limit-Up-Limit Down (LULD) Trading Pause 'N' = Non-Firm Quote 'O' = Opening Quote 'P' = News Pending 'Q' = Additional Information - Due to Related Security 'R' = Regular, two-sided open quote (FINRA Open)

	ORDER	SIZE		
Quote Condition (continued)	8	1	Text	 Condition of Quote issued: S = Due to Related Security T = Resume U = Slow on the Bid and Offer Sides due to LRP or GAP Quote V = In View of Common W = Slow Quote due to a Set Slow list on both the Bid and Offer sides X = Equipment Changeover 'Y' = Regular - One Sided Quote (UTP) 'Z' = No open/No Resume '0' = Fast Trading (UTP) '1' = Bid and Offer (non-firm) (UTP) '2' = Order Influx (UTP) '3' = Republished Limit Up-Limit Down (LULD) Price Band '4' = On Demand Intra-Day Auction
Sequence Number	9	20	Numeric	Message sequence number. (For UTP, allow up to 20 bytes.) Leading zeroes have been removed.
National BBO Indicator	10	1	Numeric	 Indicates the affect the new quote has on the National BBO. Denotes the type of appendage to be included. CTA Only - National BBO Indicator: • • • • • • • No National BBO change - Current quote does not affect the BBO. No National appendage is required. • • • • • • • • • • • • • • • • • • •

DESCRIPTION

An Intercontinental Exchange Company
FIELD FIELD MAXIMUM FORMAT

CLIENT SPECIFICATION

FIELD	change Co FIELD ORDER	MAXIMUM SIZE	FORMAT	CLIENT SPECIFICATIO DESCRIPTION
FINRA BBO (FBBO)	11	1	Numeric	Indicates the affect the new quote has on the FINRA BBO.
Indicator			FINRA BBO Indicator (FBBO) for CTA :	
		 '0' =No FINRA BBO Change - Current quote does not affect the BBO. No FINRA appendage is required. '1' = Quote Contains all FINRA BBO Information - Current quote is itself the new FINRA BBO. No FINRA appendage is required. '2' = No FINRA BBO - There is no calculation of FINRA BBO such as before Market Open or after Market Close No FINRA appendage is required. '3' = FINRA BBO Appendage - A new FINRA BBO is generated and the new BBO information is contained in the FINRA BBO appendage. 		
				See <u>CTA Specifications</u>
FINRA ADF MPID Appendage Indicator	12	1	Numeric	Denotes the type of appendage to be included. If the FINR ADF participant's BBO quotation impacts their single participant at either the Bid or Offer side of their market fo the issue, a FINRA ADF MPID Appendage will be added. This appendage will include the ADF's single participant fo its best bid and size and/or the ADF's single participant for its best offer and size.
				 FINRA ADF MPID for UTP: '0' = No ADF MPID changes - Current ADF quote does not affect the FINRA MPID. Vendors should continue to show the existing FINRA MPID(s). No appendage required. '1' = No ADF MPID exists - There is no calculation of the FINRA MPID(s)'s. No appendage is required. '2' = ADF MPID(s) attached - A new FINRA MPID was generated and the new information is contained in the attached appendage. '3' = Not Applicable - Quotation originates from a UTF participant other than the FINRA. Continue to show the existing FINRA MPID(s). No appendage required.
Quote Cancel/Correction	13	1	Text	 This field is used by a Participant to cancel or correct the most recent quote for a particular security, which was originally sent in error. CTA only: Blank = Not a Cancel Quote B= Cancel quote/Cancel Price Indication/Cancel Trading Range Indication C=Corrected Price Indication
Source of Quote	14	1	Text	 Identifies CTA or UTP as the originator of a message. C = CTA N = UTP
Retail Interest Indicator (RPI)	15	1	Text	 When Retail Price Improvement (RPI) interest is priced better than the Protected Best Bid or Offer (PBBO) by a minimum of \$0.001, an indication of interest on the Bid, Offer, or both the Bid and Offer will identify that interest will be eligible to interact with incoming Retail Order interest. Blank = Retail Interest Not Applicable
				 A = Retail Interest on Bid Quote
				B = Retail Interest on Offer Quote
			• C = Retail Interest on both the Bid and Offer Quotes	

CLIENT SPECIFICATION

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Short Sale Restriction Indicator	16	1	Text	Identifies whether or not a Short Sale Restriction is in effect. A Short Sale Restriction is to be in effect if a security's price decreases by 10% or more from the previous day's closing price. Once activated, the Short Sale Restriction will remain in effect for the remainder of the day as well as the following day, unless deactivated.
				CTA: Blank = Short Sales Restriction Not in Effect
				• A = Short Sales Restriction Activated
				• C = Short Sales Restriction Continued
				 D = Short Sales Restriction Deactivated
				• E = Short Sales Restriction in Effect
				UTP: • 0 = No Price test in effect
				■ 1 = Reg SHO in effect due to an intra-day price drop in security
				2 = Reg SHO Restriction remains in effect
LULD BBO Indicator	17	1	Text	Slank> = Limit Up-Limit Down Not Applicable
				 'A' = Bid Price above Upper Limit Price Band – Bid is Non Executable
				 'B' = Offer Price below Lower Limit Price Band– Offer is Non- Executable
				• C' = Bid Offer outside price band Not Executable
SIP-generated Message Identifier	18	1	Text	Indicates whether the SIP (CTA or UTP) was the originator of the message
				Blank = Message originated from a market participant
				• 'E' = Message originated from the SIP
National BBO LULD Indicator	19	1	Text	CTA: Indicates the effect that the Limit Up-Limit Down Price Band changes have on the National Best Bid and National Best Offer.
				Blank = Limit Up-Limit Down Not Applicable
				 A = National Best Bid and / or National Best Offer are Executable
				 B = National Best Bid below Lower Limit Price Band – National Best Bid is Non-Executable
				 C = National Best Offer above Upper Limit Price Band – National Best Offer is Non- Executable

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
National BBO LULD Indicator (continued)	19	1	Text	 CTA: D = National Best Bid below Lower Limit Price Band - National Best Bid and National Best Offer above Upper Limit Price Band - National Best Bid is in Limit State E = National Best Offer equals Lower Limit Price Band - National Best Offer is in Limit State G = National Best Bid equals Upper Limit Price Band - National Best Offer is in Limit State G = National Best Bid below Lower Limit Price Band - National Best Bid is in Limit State and National Best Offer above Upper Limit Price Band - National Best Bid is Non-Executable H = National Best Bid below Lower Limit Price Band - National Best Bid is Non-Executable and National Best Offer equals Lower Limit Price Band - National Best Bid show-Executable and National Best Offer is in Limit State I = National Best Bid equals Upper Limit Price Band and National Best Offer equals Lower Limit Price Band (Crossed NOT in Limit State) UTP: The National LULD Indicator is used to describe the limit state of the National Best Bid and Offer with respect to the price band for the issue. Blank = Limit Up-Limit Down Not Applicable A = National Best Bid below Lower Limit Price Band - National Best Offer is Non-Executable B = National Best Bid solow Lower Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer is Non-Executable D = National Best Bid below Lower Limit Price Band - National Best Offer is in Limit State F = National Best Bid equals Upper Limit Price Band - National Best Offer is in Limit State D = National Best Bid equals Upper Limit Price Band - National Best Offer equals Lower Limit Price Band - National Best Offer equals Lower Limit Price Band - National Best Offer equals Lower Limit Price Band -

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Participant Timestamp	20	15	Time (HHMMSSXXXXXXXXX)	Participant's provided nanosecond timestamp (Timestamp 1) when quotes are submitted to the SIP (HHMMSSXXXXXXXX). This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA. Reference – <u>CTA Specifications</u> See <u>UTP Specification</u>
FINRA ADF Timestamp	21	15	Time (HHMMSSXXXXXXXX)	 A FINRA Alternative Display Facility (ADF) or a FINRA Trade Reporting Facility-provided timestamp. This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA. If from an Exchange or if the FINRA ADF does not have a proprietary quotation feed, then will be set to BLANK. If the FINRA ADF or a FINRA TRF provides a proprietary feed of its quotation information, then FINRA will publish the time of the quotation. Reference - <u>CTA Specifications</u> See <u>UTP Specification</u>
FINRA ADF Market Participant Quote Indicator	22	1	Text	 UTP Only - FINRA ADF Market Participant Quote Indicator representing the Top of book quotations for each FINRA ADF participant '0' = Normal quote from FINRA, representing the BBO from the FINRA ADF. '1' = Represents a quote from a single ATS in the FINRA ADF Blank = Denotes all CTA Quotes. Blank = Denotes all UTP Quotes not from a FINRA ADF.

4. DAILY TAQ TRADES FILE DATA FIELDS

Table 5 describes the data fields available in the Daily TAQ Trades File. Every trade reported to the consolidated tape, from all CTA participants. Each trade identifies the time, exchange, security, volume, price, sale condition, and more. The Daily TAQ Trades File sorted by symbol; time; and message_sequence_number. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table.

Table 5 Daily Trades File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Time	1	15	Time (HHMMSSXXX XXXXXX)	Time the trade was published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Exchange	2	1	Text	The Exchange where the trade took place: Refer to Appendix E, Participant ID for codes
Symbol	3	16	Text	Security symbol (six-character root, apace, ten- character suffix)
Sale Condition	4	4	Text	 A Sale Condition (applies to all exchanges). Denotes the sale condition associated with a trade. Up to four codes are displayed per trade. CTA issues: '@' = Regular Trade (indicates a trade with no associated conditions) Blank = No Sale Condition required within the Category it appears (Long Trade format only) 'B' = Average Price Trade 'C' = Cash Trade (Same Day Clearing) 'E' = Automatic Execution 'F' = Intermarket Sweep Order 'H' = Price Variation Trade 'T = CAP Election Trade (prior to December 9th, 2013), or 'T = Odd Lot Trade (from December 9th, 2013 forwards) 'K' = Rule 127 (NYSE only) or Rule 155 Trade (NYSE MKT only) 'L' = Sold Last (Late Reporting) 'M' = Market Center Official Close 'N' = Next Day Trade (Next Day Clearing) 'O' = Market Center Official Open 'R' = Seller 'T' = Extended Hours Trade 'U' = Extended Hours Trade 'U' = Extended Hours Trade 'U' = Contingent Trade (from August 3rd 2015) 'X' = Cross Trade 'Z' = Sold (Out of Sequence) 'A' = Derivatively Priced 'S' = Market Center Closing Trade 'T' = Odd (Out of Sequence) 'A' = Derivatively Priced 'S' = Market Center Closing Trade 'T' = Could (Out of Sequence) 'A' = Derivatively Priced 'S' = Market Center Re-Opening Trade 'G' = Market Center Closing Trade 'T' = Qualified Contingent Trade 'S' = Reserved '9' = Corrected Consolidated Close Price per the Listing Market

CLIENT SPECIFICATION

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Sale Condition (continued)	4	4	Text	<pre>UTP issues:</pre>
Trade Volume Trade Price	5	10 21	Numeric Numeric	Contains the total number of shares traded in a single transaction for an individual security . The Trade Price is the monetary value of an individual share of security at the time of the trade. Trade Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12
Trade Stop Stock Indicator	7	1	Text	characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes. This value indicates that this Trade (NYSE only) is indicated as a Stop Stock. Possible values are:
				 Blank = N/A (NASDAQ) N = Not Indicated as Stop Stock Y = Indicated as Stop Stock Note: For a detailed explanation of "Stopped Stock," a useful resource is the Glossary (<u>Appendix B</u>) in the <u>CTS Specification</u>
Trade Correction Indicator	8	2	Numeric	 Trade Correction Indications. Possible values are: 00 = Regular trade which was not corrected, changed or signified as cancel or error 01 = Original trade which was late corrected (This record contains the original time - HHMM and the corrected data for the trade). 07 = Original trade which was later signified as error

CLIENT SPECIFICATION

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Trade Correction	8	2	Numeric	• 08 = Original trade which was later signified as cancel
Indicator(continued)				• 10 = Cancel record (This record follows '08' records)
				 11 = Error record (This record follows '07' records)
				 12 = Correction record (This record follows'01' records and contains the correction time and the original "incorrect" data). The final correction will be published.
Sequence Number	9	16	Text	Unique message sequence number for both CTA and UTP trade messages. For UTP, allow up to 12 characters for the Trade Sequence. For CTA, allow up to 16 characters. Excludes leading zeroes. See Appendix I – <u>CTA Specifications</u> See <u>UTP Specification</u>
Trade ID	10	20	Text	Identifer for Tracking Trades. The tradeld is unique per participant per symbol per session within a trading session. <blank> for CTA.</blank>
Source of Trade	11	1	Text	Source of Trade Message: C = CTA N = NASDAQ
Trade Reporting Facility	12	1	Text	 The Trade Reporting Facility (TRF) / Exchange where trade was reported, if applicable. Possible values are: Blank = The trade was reported directly by the participant Refer to Appendix E, Participant ID for codes
Participant Timestamp	13	15	Time (HHMMSSXXXXXXXXX)	Participant's provided nanosecond timestamp (Timestamp 1) when trades are submitted to the SIP (HHMMSSXXXXXXXX). This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA. Reference – <u>CTA Specifications</u> See <u>UTP Specification</u>
Trade Reporting Facility (TRF) Timestamp	14	15	Time (HHMMSSXXXXXXXXX)	A FINRA Alternative Display Facility (ADF) or a FINRA Trade Reporting Facility-provided timestamp. This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA.
				 If from an Exchange or if the FINRA ADF does not have a proprietary quotation feed, then will be set to BLANK. If the FINRA ADF or a FINRA TRF provides a proprietary feed of its quotation information, then FINRA will publish the time of the quotation.
				Reference – <u>CTA Specifications</u> See <u>UTP Specification</u>
Trade Through Exempt Indicator (TTE)	15	1	Numeric	Denotes whether or not a trade is exempt (Rule 611) and when used jointly with certain Sale Conditions, will more fully describe the characteristics of a particular trade.
				• "0" = Not a Trade Through Exemption
				• "1" = Trade Through Exemption

5. DAILY TAQ NBBO FILE DATA FIELDS

Table 6 describes the data fields available in the Daily TAQ NBBO File. An addendum to the Daily Quotes file, containing continuous National Best Bid and Offer updates and consolidated trades and quotes for all listed and non-listed issues. The Daily TAQ NBBO File sorted by symbol, time, and message_sequence_number. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table. Table 6 Daily NBBO File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Time	1	15	Time (HHMMSSXXXXXXXXX)	Time the trade was published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Exchange	2	1	Text	The Exchange that issued the quote Refer to Appendix E, Participant ID for codes
Symbol	3	16	Text	Security symbol (six-character root, space, ten character suffix)
Bid Price	4	21	Numeric	Represents the highest price a prospective buyer is prepared to pay at a particular time for a security. Bid Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
Bid Size	5	10	Numeric	Bid size in units of trade, ten characters. Identifies the number of round-lots, for a security. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
Offer Price	6	21	Numeric	Represents the lowest price acceptable to a prospective seller at a particular time for a security. Offer Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters.
Offer Size	7	10	Numeric	Offer size in units of trade, ten characters. Identifies the number of round-lots, for a security. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
Quote Condition	8	1	Text	 Denotes a particular condition applicable to the quote. 'A' = Slow on the Offer Side 'B' = Slow on the Bid Side 'C' = Closing 'D' = News Dissemination 'E' = Slow Quote on the Bid due to LRP or GAP Quote 'F' = Slow Quote on the Offer due to LRP or GAP Quote 'G' = Trading Range Indication 'H' = Slow Quote on the Bid and Offer Sides 'I' = Order Imbalance 'J' = Due to a Related Security - News Dissemination 'K' = Due to a Related Security - News Pending 'L' = Closed Market Maker (FINRA) 'M' = Limit-Up-Limit Down (LULD) Trading Pause 'N' = Non-Firm Quote 'O' = Opening Quote 'P' = News Pending 'Q' = Additional Information - Due to Related Security 'R' = Regular, two-sided open quote (FINRA Open) 'S' = Due to Related Security 'T' = Resume 'U' = Slow on the Bid and Offer due to LRP or GAP Quote 'V' = In View of Common 'W' = Slow Quote Due to Set Slow List on Both the Bid/Offer Sides 'X' = Equipment Changeover 'Y' = Regular - One Sided Quote (UTP) 'Z' = No open/No Resume 'O' = Fast Trading (UTP) '1' = Bid and Offer (non-firm) (UTP) '2' = Order Influx (UTP) '3' = Republished Limit Up-Limit Down (LULD) Price Band '4' = On Demand Intra-Day Auction

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Sequence Number	9	20	Numeric	Message sequence number. Excludes leading zeroes.
National BBO Indicator	10	1	Numeric	 Indicates the affect the new quote has on the National BBO. Denotes the type of appendage to be included. CTA Only - National BBO Indicator: 4' = Long Format of National BBO Appendage - A new National BBO is generated and the new BBO information is contained in the Long National BBO appendage. '6' = Expanded Price Short Format of National BBO Appendage - a new National BBO is generated and the new BBO information is contained in the Expanded Price Short National BBO appendage. '6' = Expanded Price Short Format of National BBO Appendage - a new National BBO is generated and the new BBO information is contained in the Expanded Price Short National BBO appendage. See <u>CTA Specifications</u> UTP Only - National BBO Appendage Indicator: '2' = Short Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new information is contained in the short form appendage (NBBO File). '3' = Long Form of National BBO Appendage - A new National BBO was generated as a result of the UTP participant's quote update and the new BBO information is contained in the Long National BBO appendage (NBBO File).
FINRA BBO Indicator	11	1	Numeric	 CTA FINRA BBO Indicator indicates the affect the new quote has on the FINRA BBO: '0' =No FINRA BBO Change - Current quote does not affect the BBO. No FINRA appendage is required. '1' = Quote Contains all FINRA BBO Information - Current quote is itself the new FINRA BBO. No FINRA appendage is required. '2' = No FINRA BBO - There is no calculation of FINRA BBO such as before Market Open or after Market Close. No FINRA appendage is required. '3' = FINRA BBO Appendage - A new FINRA BBO is generated and the new BBO information is contained in the FINRA BBO appendage.

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
FINRA ADF MPID Indicator	12	1	Numeric	UTP Denotes the type of appendage to be included. If the FINRA ADF participant's BBO quotation impacts their single participant at either the Bid or Offer side of their market for the issue, a FINRA ADF MPID Appendage will be added. This appendage will include the ADF's single participant for its best bid and size and/or the ADF's single participant for its best offer and size. FINRA ADF MPID for UTP:
				 '0' = No ADF MPID changes – Current ADF quote does not affect the FINRA MPID. Vendors should continue to show the existing FINRA MPID(s). No appendage required.
				 '1' = No ADF MPID exists – There is no calculation of the FINRA MPID(s)'s. No appendage is required.
				 '2' = ADF MPID(s) attached - A new FINRA MPID was generated and the new information is contained in the attached appendage.
				• '3' = Not Applicable – Quotation originates from a UTP participant other than the FINRA. Continue to show the existing FINRA MPID(s). No appendage required.
				See UTP Specification
Quote Cancel/Correction	13	1	Text	 This field is used by a Participant to cancel or correct the most recent quote for a particular security, which was originally sent in error. CTA only: Blank = Not a Cancel Quote B= Cancel quote/Cancel Price Indication/Cancel Trading Range Indication C=Corrected Price Indication
Source of Quote	14	1	Text	Identifies CTA or UTP as the originator of a message. • 'C'= CTA • 'N'= UTP
NBBO Quote Condition	15	1	Text	Indicates the status of the NBBO as being either open or closed and are not an indication of an automatic status. Condition of Quote issued:
				UTP 'L' = NBBO Closed Market Maker
				• 'R' = NBBO Regular, two-sided open quote
				• 'Y' = NBBO Regular - One Sided Quote
				CTA • 'A' = Slow Quote on the Offer Side
				 'B' = Slow Quote on the Bid Side
				• 'C' = Closing
				• 'E' = Slow Quote on the Bid due to LRP or GAP Quote
				 'F' = Slow Quote on the Offer due to LRP or GAP Quote
				• 'H' = Slow Quote on the Bid and Offer sides
				• '0' = Opening Quote
				• 'R' = Regular
				 'W' – Slow Quote due to a Set Slow List on Both the Bid and Offer sides

FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
16	1	Text	The Exchange associated with the Best Bid:
			Refer to Appendix E, Participant ID for codes
17	21	Numeric	Represents the Best Bid Price. Best Bid Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
18	10	Numeric	Represents the Best Bid Size associated with the Best Bid Price on a consolidated basis. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
19	4	Text	Best Bid FINRA Market Maker ID (Long Appendage)
20	1	Text	The Exchange associated with the Best Offer: Refer to Appendix E, Participant ID for codes
21	21	Numeric	Represents the Best Offer Price on a consolidated basis. Best Offer Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
22	10	Numeric	Represents the Best Offer Size associated with the Best Bid Price. Best Offer size in units of trade, ten characters. For CTA, allow up to 7 characters. For UTP, allow up to 10 characters.
23	4	Text	Best Offer FINRA Market Maker ID (Long Appendage)
24	1	Text	 CTA: Indicates the effect the Quote has on the Limit Up-Limit Down Price Band range. An Offer Price that is below the Lower Limit Price Band, or a Bid Price that is above the Upper Limit Price Band is identified as follows: Blank = Limit Up-Limit Down Not Applicable A = Bid Price above Upper Limit Price Band – Bid is Non-Executable B = Offer Price below Lower Limit Price Band –Offer is Non-Executable UTP: Describes whether or not the participant quotation is executable within the context of the price band for the issue. Blank = Limit Up-Limit Down Not Applicable A = Bid Price above Upper Limit Price Band –Offer is Non-Executable B = Offer Price below Lower Not Applicable A = Bid Price above Upper Limit Price Band –Bid is Non-Executable C = Bid and Offer outside price band. Not executable
	ORDER 16 17 18 18 19 20 21 22 23	ORDER SIZE 16 1 17 21 18 10 19 4 20 1 21 21 22 10 23 4	ORDERSIZE161Text1721Numeric1810Numeric194Text201Text2121Numeric2210Numeric234Text

An Intercontinental Exch	ange Compa	ny		CLIENT SPECIFICATION
FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
LULD NBBO Indicator	25	1	Text	 Indicates the affect that the Limit Up-Limit Down Price Band changes have on the National Best Bid and /or National Best Offer. CTA: Blank = Limit Up-Limit Down Not Applicable A = National Best Bid and/or National Best Offer are Executable B = National Best Bid below Lower Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer is Non-Executable D = National Best Bid below Lower Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer reques Lower Limit Price Band - National Best Offer reques Lower Limit Price Band - National Best Offer reques Lower Limit Price Band - National Best Offer reques Lower Limit Price Band - National Best Offer ris in Limit State F = National Best Bid equals Upper Limit Price Band - National Best Offer ris in Limit State G = National Best Bid declow Lower Limit Price Band - National Best Offer sis non-Executable G = National Best Bid below Lower Limit Price Band - National Best Bid is in Limit State H = National Best Bid below Lower Limit Price Band - National Best Bid is Non-Executable and National Best Offer equals Lower Limit Price Band - National Best Bid is in Limit State I = National Best Bid equals Upper Limit Price Band - National Best Bid is in Limit State I = National Best Bid equals Upper Limit Price Band - National Best Offer is in Limit State M = National Best Bid equals Upper Limit Price Band - National Best Bid is in Limit State and National Best Offer is in Limit State I = National Best Bid equals Upper Limit Price Band - National Best Bid is Non-Executable A = National Best Bid below Lower Limit Price Band - National Best Bid is Non-Executable A = National Best Bid below Lower Limit Price

FIELD	FIELD	MAXIMUM	FORMAT	DESCRIPTION
	ORDER	SIZE		
				INTE
LULD NBBO Indicator (Continued)	25	1	Text	 UTP: F = National Best Offer equals Lower Limit Price Band – National Best Offer is in Limit State G = National Best Bid equals Upper Limit Price Band – National Best Bid is in Limit State and National Best Offer above Upper Limit Price Band – National Best Offer is Non- Executable H = National Best Offer equals Lower Limit Price Band – National Best Offer is in Limit State and National Best Bid below Lower Limit Price Band – National Best Bid below Lower Limit Price Band – National Best Bid is Non- Executable I = National Best Bid equals Upper Limit Price Band and National Best Offer equals Lower Limit Price Band See UTP Specification
SIP-generated Message Identifier	26	1	Text	 Indicates whether the SIP (CTA or UTP) was the originator of the message. Blank = Message originated from a market participant E = Message originated from the SIP (CTA or UTP)
Participant Timestamp	27	15	Time (HHMMSSXXX XXXXXX)	Participant's provided nanosecond timestamp (Timestamp 1) when quotes are submitted to the SIP (HHMMSSXXXXXXX). This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA. Reference – <u>CTA Specifications</u> See <u>UTP Specification</u>
FINRA ADF Timestamp	28	15	Time (HHMMSSXXX XXXXXX)	 A FINRA Alternative Display Facility (ADF) or a FINRA Trade Reporting Facility-provided timestamp. This timestamp has nanosecond precision for UTP, and microsecond precision appended with three zeroes for CTA. If from an Exchange or if the FINRA ADF does not have a proprietary quotation feed, then will be set to BLANK. If the FINRA ADF or a FINRA TRF provides a proprietary feed of its quotation information, then FINRA will publish the time of the quotation. Reference - <u>CTA Specifications</u> See <u>UTP Specification</u>

6. DAILY TAQ QUOTE ADMIN MESSAGE LULD FILE DATA FIELDS

Table 7 describes the data fields available in the Daily Quote Admin Message LULD File. All Limit-up/Limit-down Price Band messages published over CQS and UQDF. The Header Row contains the name of each records in the file. The Daily TAQ Quote Admin Message LULD File sorted by time. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table.

Table 7 Daily Quote Admin Message LULD File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Time	1	15	Time (HHMMSSXXXXXXXXX)	Time the message published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Message Sequence Number	2	20	Numeric	The Message Sequence Number is designed to identify each message for tracking purposes. At the beginning of each operational cycle this number will begin with zero as the first message, and will be typically incremented by one each time a new message is transmitted (though with some exceptions). Excludes leading zeroes.
Source	3	1	Text	Source SIP feed for the message. • 'C' = CTA • 'N' = UTP
Symbol	4	16	Text	Security symbol (six-character root, space, ten- character suffix)
LULD Price Band Indicator	5	1	Text	CTA: Populated with blank
				 UTP: The LULD Price Band Indicator denotes the event that initiated the price band message being disseminated. A = Opening Update B = Intra-Day Update C = Restated Value D = Suspended during trading halt or trading pause E = Re-Opening Update F = Outside price band rule hours Blank = None provided
LULD Lower Limit Price Band	6	21	Numeric	Represents the lower price band value for a security. For UTP, up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				Note that when the Lower Limit Price Band field is zero, it identifies a trading pause for that security.
LULD Upper Limit Price Band	7	21	Numeric	Represents the upper price band value for a security. For UTP, up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				When the Upper Limit Price Band field is zero, it identifies a trading pause for that security.

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
National BBO LULD Indicator	8	1	Text	 CTA: Indicates the effect that the Limit Up-Limit Down Price Band changes have on the National Best Bid and National Best Offer. Blank = Limit Up-Limit Down Not Applicable A = National Best Bid below Lower Limit Price Band - National Best Bid is Non-Executable C = National Best Bid below Lower Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer is Non- Executable D = National Best Bid below Lower Limit Price Band and National Best Offer above Upper Limit Price Band - National Best Bid and National Best Bid equals Upper Limit Price Band and Best Bid equals Upper Limit Price Band - National Best Differ is Non-Executable H = National Best Bid below Lower Limit Price Band - National Best Offer is in Limit State I = National Best Bid equals Upper Limit Price Band - National Best Offer equals Lower Limit Price Band (Crossed - NOT in Limit State) UTP: The National Best Bid and Offer with respect to the price band for the issue. Blank = Limit Up-Limit Down Not Applicable A = National Best Bid and National Best Offer above Upper Limit Price Band - National Best Bid and National Best Offer are Executable D = National Best Bid below Lower Limit Price Band - National Best Bid and National Best Offer aboxe Upper Limit Price Band - National Best Bid and National Best Offer are Non-Executable D = National Best Bid below Lower Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Offer above Upper Limit Price Band - National Best Bid and National Best Offer above Limit Price Band anonal Best Offer above Upper L

7. DAILY TAQ TRADE ADMIN MESSAGE LULD FILE DATA FIELDS

Table 8 describes the data fields available in the Daily Trade Admin Message LULD File. All Limit-up/Limit-down Price Band messages published over CTS and UTDF. The Daily TAQ Trade Admin Message LULD File sorted by time. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table.

Table 8 Daily Trade Admin Message LULD File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Time	1	15	Time (HHMMSSXXXXXXXXX)	Time of message published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Message Sequence Number	2	20	Numeric	The Message Sequence Number is designed to identify each message for tracking purposes. At the beginning of each operational cycle this number will begin with zero as the first message, and will be typically incremented by one each time a new message is transmitted (though with some exceptions). Excludes leading zeroes.
Source	3	1	Text	Source SIP feed for the message.
				 'C' = CTA 'N' = UTP
Symbol	4	16	Text	Security symbol (six-character root, space, ten- character suffix)
LULD Lower Limit Price Band	5	21	Numeric	Represents the lower price band value for a security. For UTP, allow up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				Note that when the Lower Limit Price Band field is zero, it identifies a trading pause for that security.
LULD Upper Limit Price Band	6	21	Numeric .	Represents the upper price band value for a security. For UTP, allow up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				When the Upper Limit Price Band field is zero, it identifies a trading pause for that security.

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
LULD Price Band	7	1	Text	CTA:
Indicator				Identifies the Limit Up-Limit Down action (e.g., Price Bands, Consolidated Quotation system National Best Bid/Offer Limit State Entered/Exited) related to a security
				Blank = Limit Up-Limit Down Not Applicable
				• A = Limit Up-Limit Down Price Band
				B = Republished Limit Up-Limit Down Price Band
				• C = National Best Bid Limit State Entered
				D = National Best Bid Limit State Exited
				• E = National Best Offer Limit State Entered
				• F = National Best Offer Limit State Exited
				 G = National Best Bid and National Best Offer Limit State Entered
				 H = National Best Bid and National Best Offer Limit State Exited
				 I = National Best Bid Limit State Entered and National Best Offer Limit State Exited
				 J = National Best Bid Limit State Exited and National Best Offer Limit State Entered
				UTP:
				Denotes the event that initiated the price band message being disseminated.
				• A = Opening Update
				B = Intra-Day Update
				• C = Restated Value
				 D = Suspended during trading halt or trading pause
				• E = Re-Opening Update
				• F = Outside price band rule hours
				 Blank = None provided

9. DAILY TAQ CTA ADMIN MESSAGE FILE DATA FIELDS

Table 10 Daily TAQ CTA Admin Message provides administrative messages disseminated for CTA (National Market Systems) during the trading day. The Daily TAQ CTA file provides CTA of an Opening Delay, Trading Halt, Trading Resume, Prices represented by short fields have implied 2 decimal places Indication, Market Imbalance, Market-Wide Circuit Breaker Decline Level Status Levels, etc. This file is also used to identify the Limit Up-Limit Down action associated with a security (e.g., Price Bands, Limit State Entered, Limit State Exited). The Daily TAQ CTA Admin Message File sorted by Symbol, Time and Message sequence number. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table. Refer to <u>CTA Specifications</u>

Table 10 Daily TAQ CTA Admin Message Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Timestamp	1	15	Time (HHMMSSXXXXXXXXX)	Time of message published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Symbol	2	16	Text	Security symbol (six-character root, space, ten-character suffix). A space between the symbol root and suffix.
Message Category	3	1	Text	Identifies the message. A = Administrative E = Listed Equity M = Market Status
Message Type	4	1	Text	 Identifies the message for CTA: Administrative Message H = Administrative Unformatted S = Market Volume and Index Equity Message F = Equity Trading Status Market Status K = Market-Wide Circuit Breaker Decline Level Status L = Market-Wide Circuit Breaker Status
Message Sequence Number	5	20	Numeric	Message Sequence Number (MSN) is designed to identify each message for tracking purposes. All messages are assigned a sequence number (excludes leading zeroes).
Participant Identifier	6	1	Text	Participant ID identifies the Exchange or Processor that initiated the message. Refer to Appendix E, Participant ID for codes.
Participant Timestamp	7	15	Time (HHMMSSXXXXXXXXX)	Participant-provided timestamp (Timestamp 1) representing the number of microseconds since midnight Eastern Time (ET). For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Financial Status	8	1	Text	 Identifies the financial status of the security. 0 = Not Bankrupt / Not Below Continuing Listing Standards/Not Late Filing/ Not Creations Suspended (for Exchange Traded Products) / Not Redemptions Suspended (for Exchange Traded Products) / Not Liquidation (for Exchange Traded Products) 1 = Bankrupt 2 = Below Continuing Listing Standards (For NYSE, NYSE MKT & Regional listed issues) 3 = Bankrupt & Below Continuing Listing Standards (For NYSE, NYSE MKT & Regional listed issues) 4 = Late Filing 5 = Bankrupt & Late Filing 6 = Below Continuing Listing Standards & Late Filing (For NYSE, NYSE MKT & Regional listed issues) 7 = Bankrupt & Below Continuing Listing Standards & Late Filing (For NYSE, NYSE MKT & Regional listed issues) 8 = Creations Suspended (for Exchange Traded Products) 9 = Redemptions Suspended (for Exchange Traded Products) A = Liquidation (for Exchange Traded Products)

FIELD ORDER	MAXIMU SIZE	FORMAT	DESCRIPTION
9	3	Text	Represents the International Standard Foreign Currency code in which the transaction was executed. For transactions executed in U.S. Dollars,
			this field is space-filled. Default to Blank if not provided and for UTP.
10	1	Text	Identifies the trading status applicable to the transaction. 1 = Opening Delay 2 = Trading Halt 3 = Resume 4 = No Open/No Resume 5 = Price Indication 6 = Trading Range Indication 7 = Market Imbalance Buy 8 = Market Imbalance Sell 9 = Market On Close Imbalance Buy A = Market On Close Imbalance Sell B = Reserved C = No Market Imbalance D = No Market On Close Imbalance E = Short Sale Restriction F = Limit Up-Limit Down
11	1	Text	Denotes the reason for the Opening Delay or Trading Halt. Refer to Appendix B in the <u>CTA Specifications</u> for definition of values. D = News Dissemination
			 D = News Dissemination I = Order Imbalance M = Limit UP-Limit Down (LULD) Trading Pause P = News Pending X = Equipment Changeover Y = Sub-Penny Trading 1 = Market-Wide Circuit Breaker Level 1 – Breached 2 = Market-Wide Circuit Breaker Level 2 – Breached 3 = Market-Wide Circuit Breaker Level 3 – Breached
12	1	Text	 The Opening Delay or Trading Halt is used when events relating to one security will affect the price and performance of another security. Due to Related Security can be used by itself or in conjunction with a Halt Reason (Regulatory or Non-Regulatory). 0 = Not Due to Related Security 1 = Due to Related Security
13	1	Text	 Identifies whether matters affecting the common stock of a company also affect the performance of the associated non-common securities, e.g., warrants, rights, preferred, classes, etc. Those securities, which must be of the same company, are globally Opening Delayed, Trading Halted, Resumed or are No Open/No Resume for a Participant in view of the common stock. 0 = Not In View of Common 1 = In View of Common
14	21	Numeric	Price, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits. For CTA, allow up to 12 characters. For UTP, allow up to 21 characters. Excludes leading and trailing zeroes.
15	1	Numeric	 Identifies the status of a Market Imbalance, Price Indication or Trading Range Indication. Refer to Appendix B for definition of values. Defines the status of the security: 1 = Price Indicator 2 = New Price Indicator 3 = Corrected Price Indication 4 = Cancelled Market Imbalance/Price Indication/Trading Range /Trading Range Indication
	9 10 11 12 13	9 3 10 1 11 1 11 1 12 1 13 1 14 21	9 3 Text 10 1 Text 11 1 Text 12 1 Text 13 1 Text 14 21 Numeric

An Intercontinental E	FIELD	MAXIMU	IM	CLIENT SPECIFICATION
FIELD	ORDER	SIZE	FORMAT	DESCRIPTION
High Indication Price/Upper Limit	16	12	Text	Upper price band value for a security.
Price Band	••		When the 'Security Status' field code is 'Limit Up-Limit Down', and the 'Limit Up-Limit Down Indicator' field code is Limit Up Limit Down' Price Bands, the Upper Limit Price Band value will be contained in the 'High Indication Price/Upper Limit Price Band' fields.	
				BLANK = When the Upper Limit Price Band field is blank, it identifies that the previous Price Bands have been removed and are no longer effective for a security.
Low Indication Price/Lower Limit	17	12	Text	Lower price band value for a security.
Price Band				When the 'Security Status' field code is 'Limit Up-Limit Down', and the 'Limit Up-Limit Down Indicator' field code is Limit Up Limit Down Price Bands, the Lower Limit Price Band values will be contained in the 'Low Indication Price/Lower Limit Price Band' fields
				When the Lower Limit Price Band field is zero, it identifies that the previous Price Bands have been removed and are no longer effective for security.
Buy Volume	18	10	Numeric	Represents the reported imbalance of buy orders without matching sell orders for the security for a Participant. Refer to Appendix B for Market Imbalance and Market on Close Imbalance (MOC) definitions. Refer to Appendix B in the <u>CTA Specifications</u> for definition of values.
Sell Volume	19	10	Numeric	Represents the reported imbalance of sell orders without matching buy orders for the security for a Participant. Refer to Appendix B for Market Imbalance and Market on Close Imbalance (MOC) definitions. Refer to Appendix B in the <u>CTA Specifications</u> for definition of values.
Short Sale Restriction Indicator	20	1	Text	Identifies whether or not a Short Sale Restriction is in effect for a securit A Short Sale Restriction is to be in effect if a security's price decreases by 10% or more from the previous day's closing price. Once activated, the Short Sale Restriction will remain in effect for the remainder of the day a well as the following day, unless deactivated.
				 Blank = Short Sales Restriction Not in Effect A = Short Sales Restriction Activated C = Short Sales Restriction Continued D = Short Sales Restriction Deactivated E = Short Sales Restriction in Effect
Limit Up-Limit Down (LULD) Indicator	21	1	Text	Identifies the Limit Up-Limit Down action (e.g., Price Bands, Consolidate Quotation system National Best Bid/Offer Limit State Entered/Exited) related to a security.
				When the 'Limit Up-Limit Down Indicator' code is set to either Limit Up- Limit Down Price Bands, the Price Band values will be contained in the 'High Indication Price/Upper Limit Price Band' and 'Low Indication Price/Lower Limit Price Band' fields.
				 Blank = Limit Up-Limit Down Not Applicable
				 A = Limit Up-Limit Down Price Band B = Republished Limit Up-Limit Down Price Band C = National Best Bid Limit State Entered D = National Best Bid Limit State Exited
				 E = National Best Offer Limit State Entered F = National Best Offer Limit State Exited G = National Best Bid and National Best Offer Limit State Entered H = National Best Bid and National Best Offer Limit State Exited
				 I = National Best Bid Limit State Entered and National Best Offer Limit State Exited J = National Best Bid Limit State Exited and National Best Offer Limit State Entered

An Intercontinental Ex				CLIENT SPECIFICATION
FIELD	FIELD ORDER	MAXIMUN SIZE	1 FORMAT	DESCRIPTION
Market-Wide Circuit Breaker Decline Level 1	22	12	Text	 The Market-Wide Circuit Breaker Decline Level Status message is used to report the calculated Level 1, Level 2 and Level 3 threshold values for the current trading day necessary to trigger a circuit breaker. Levels are reset each trading day based on the closing value of the S&P 500 Index. If Levels are set as a result of inaccurate activity, Levels will be reset and disseminated. The most recently disseminated Levels will be in effect for that trading day. Note: MWCB levels are index values (not prices) and have implied 2 decimal places. The Market-Wide Circuit Breaker Decline Level Status Message will be disseminated by CQS on a daily trading day basis at approximately 7:00 am and at 8:00 am ET; and additional occurrences if necessary, e.g., due to erroneously set Levels. Identifies the daily established drop level value (trigger value) associated with each Decline Level: Level 1 Value = 7% of Previous Close S&P 500 Value The Level 1 Value is the whole and fractional or decimal portion of the Market-Wide Circuit Breaker Level Status Values with the Price Denominator Indicator determining the price representation.
Market-Wide Circuit Breaker Decline Level 2	23	12	Text	 The Market-Wide Circuit Breaker Decline Level Status message is used to report the calculated Level 1, Level 2 and Level 3 threshold values for the current trading day necessary to trigger a circuit breaker. Levels are reset each trading day based on the closing value of the S&P 500 Index. If Levels are set as a result of inaccurate activity, Levels will be reset and disseminated. The most recently disseminated Levels will be in effect for that trading day. Note: MWCB levels are index values (not prices) and have implied 2 decimal places. The Market-Wide Circuit Breaker Decline Level Status Message will be disseminated by CQS on a daily trading day basis at approximately 7:00 am and at 8:00 am ET; and additional occurrences if necessary, e.g., due to erroneously set Levels. Identifies the daily established drop level value (trigger value) associated with each Decline Level: Level 2 Value = 13% of Previous Close S&P 500 Value
Market-Wide Circuit Breaker Decline Level 3	24	12	Text	 Market-Wide Circuit Breaker Level Status Values with the Price Denominator Indicator determining the price representation. The Market-Wide Circuit Breaker Decline Level Status message is used to report the calculated Level 1, Level 2 and Level 3 threshold values for the current trading day necessary to trigger a circuit breaker. Levels are reset each trading day based on the closing value of the S&P 500 Index. If Levels are set as a result of inaccurate activity, Levels will be reset and disseminated. The most recently disseminated Levels will be in effect for that trading day. Note: MWCB levels are index values (not prices) and have implied 2 decimal places. The Market-Wide Circuit Breaker Decline Level Status Message will be disseminated by CQS on a daily trading day basis at approximately 7:00 am and at 8:00 am ET; and additional occurrences if necessary, e.g., due to erroneously set Levels. Identifies the daily established drop level value (trigger value) associated with each Decline Level: Level 3 Value = 20% of Previous Close S&P 500 Value

An Intercontinental Exchange Company FIELD ________ FIELD ______ MAXIMUM SIZE _______ CLIENT SPECIFICATION FORMAT DESCRIPTION ORDER The Market-Wide Circuit Breaker Status message is used to report the Market-Wide Circuit 25 1 Text Market-Wide Circuit Breaker threshold Level that has been breached. **Breaker Status** Each Level will be disseminated only once during the trading day, unless a Level is breached as a result of erroneous activity. The most recently disseminated breached Level will be in effect. The duration of Market-Wide Circuit Breaker Level 1 and Level 2 Regulatory Trading Halts is fifteen minutes. Following Level 3 Market-Wide Circuit Breaker Regulatory Trading Halts, trading will be halted for the remainder of the trading day and carried over to the following trading day in a Regulatory Trading Halted state. Provides description of general administrative message. Message Text 8000 26 Text

10. DAILY TAQ UTP ADMIN MESSAGE FILE DATA FIELDS

Table 11 describes the data fields available in the Daily TAQ UTP Admin Message File. The Daily TAQ UTP Admin Message provides administrative messages disseminated for UTP during the CTA (National Market Systems) during the trading day and identifiers the message. The Daily TAQ UTP Admin Message Files are sorted by Symbol, Time and Message sequence number. The Header Row contains the name of each records in the file. The Trailer Row in a pipe-delimited format indicating the "END" of the Record with an eight-character date (YYYYMMDD) and Record Count (the number of records) stored in each file. A Field Terminator '\n' added to indicate the end of the record. This file is delivered in pipe-delimited format compressed, using gzip; for reference, the order in which the fields appear is listed the table. Reference UTP Specification

Table 11 Daily TAQ UTP Admin Message File Data Fields

FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Timestamp	1	15	Time (HHMMSSXXXXXXXXX)	Time of message published by the SIP (CTA or UTP) in nanoseconds (HHMMSSXXXXXXXX). For UTP, nanoseconds timestamp provided by the SIP. For CTA, microseconds timestamp provided by the SIP appended with three trailing zeroes.
Symbol	2	16	Text	Security symbol (six-character root, space, ten-character suffix). A space between the symbol root and suffix.
Message Category	3	1	Text	Identifies the message. • A = Administrative
Message Type	4	1	Text	Identifies the message for UTP. Administrative Message A = General Administrative B = Issue Symbol Directory C = Market Wide Circuit Breaker Decline D = Market Wide Circuit Breaker Status H = CROSS SRO Trading Action K = Market Center Trading Action P = Limit Up –Limit Down Price Band V = Reg SHO Short Sale Restriction Indicator
Message Sequence Number	5	20	Numeric	Identifies each message for tracking purposes. Excludes leading zeroes.
Market Center Originator ID	6	1	Text	Denotes the UTP participant or system that originated the message. Refer to Appendix E, Participant ID for codes
Sub-Market Center Identifier	7	1	Text	 Indicates the originating market center of a trade transaction for FINRA reported trades. Refer to Appendix E, Participant ID for codes BLANK = No sub-market; Trade originates from FINRA Alternative Display Facility.
Participant Timestamp	9 8	15	Time (HHMMSSXXXXXXXXX)	Participant-provided timestamp ((Timestamp 1) representing the number of nanoseconds.
Financial Status Indicator	9	1	Text	 Identifies the financial status of the security: C = Creations and/or Redemptions Suspended for Exchange Traded Product D = Deficient: Issuer Failed to Meet NASDAQ Continued Listing Requirements E = Delinquent: Issuer Missed Regulatory Filing Deadline Q = Bankrupt: Issuer Has Filed for Bankruptcy N = Normal (Default): Issuer Is NOT Deficient, Delinquent, or Bankrupt G = Deficient and Bankrupt H = Deficient and Delinquent J = Delinquent and Bankrupt K = Deficient, Delinquent, and Bankrupt BLANK = no value provided
Short Sale Threshold Indicator	10	1	Text	 Short Sales Threshold Indicator: Y= Issue is restricted N = Issue is not restricted BLANK = Threshold Indicator Not Available

CLIENT SPECIFICATION

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FIELD	FIELD ORDER	MAXIMUM SIZE	FORMAT	DESCRIPTION
Short Sale Restriction Indicator	11	1	Numeric	 Identifies the Reg SHO short sale price test status for a NASDAQ-listed issue at the time of dissemination: 0 = No Price test in effect 1 = Reg SHO in effect due to an intraday price drop in security 2 = Reg SHO Restriction remains in effect
Trading Action Code	12	1	Text	 Trade Action Code H = Trading Halt Q = Quotation Resumption T = Trading Resumption P = Volatility Trading Pause Z = Regular Trading In Effect BLANK = no value provided
Trading Action Sequence Number	13	21	Numeric	Unique UTP Trading Action Sequence Number consists of a consecutive sequence of positive integers starting at 1. Excludes leading zeroes.
Trading Action Timestamp	14	15	Time (HHMMSSXXXXXXXXX)	Timestamp of when the action occurred.
Trading Action Reason	15	6	Text	 Trading Action Reason Code for UTP: A = Halt News Pending B = Halt News Dissemination C = Single Stock Trading Pause In Affect D = Regulatory Halt Extraordinary Market Activity E = Halt ETF F = Trading Halted; For information requested by NASDAQ G = Halt Not Compliance H = Halt Filings Not Current I = Halt Regulatory Concern K = Operations Halt, Contact Market Operations L = IPO Issue not yet Trading M = Corporate Action N = Quotation Not Available O = Volatility Trading Pause P = Volatility Trading Pause – Straddle Condition Q = News and Resumption Times R = Single Stock Trading Pause/Quotation-Only Period S = Qualifications Issues Reviewed/Resolved; Quotations/Trading to Resume U = Issuer News Not Forthcoming; Quotations/Trading To Resume V = Qualifications Halt ended; maint. Req. met; Resume W = Qualifications Halt Concluded; Filings Met; Quotes/Trades To Resume X = Trade Halt Concluded By Other Regulatory Auth,: Quotes/Trades Resume X = Trade Halt Concluded By Other Regulatory Auth,: Quotes/Trades Resume X = Issue Available A1 = Market Wide Circuit Breaker Halt – Carry over from previous day A2 = Market Wide Circuit Breaker Resumption A3 = IPO security – positioning window extension 1 = Market Wide Circuit Breaker Halt – Level 1 2 Market Wide Circuit Breaker Halt – Level 3 BLANK = Reason not provided

An Intercontinental Exchange Company FIELD MAXIMUM SIZE

FIELD	ORDER	SIZE	FORMAT	DESCRIPTION
LULD Lower Limit Price Band	16	21	Numeric	Represents the lower price band value for a security. For UTP, allow up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				Note that when the Lower Limit Price Band field is zero, it identifies a trading pause for that security.
LULD Upper Limit Price Band	17	21	Numeric .	Represents the upper price band value for a security. For UTP, allow up to 21 characters, fourteen characters for the whole number, one character for the decimal point, and six characters for the decimal digits.
				When the Upper Limit Price Band field is zero, it identifies a trading pause for that security.
LULD Price Band Indicator	18	1	Text	Denotes the event that initiated the price band message being disseminated.
				• A = Opening Update
				B = Intra-Day Update
				• C = Restated Value
				D = Suspended during trading halt or trading pause
				• E = Re-Opening Update
				• F = Outside price band rule hours
				Blank = None provided
Market-Wide Circuit Breaker Decline Level 1	19	12	Text	Informs participants and the UTP data recipients what the daily MWCB breach points are set to for the current trading day. Market Wide Circuit Breaker Decline Level 1 Breached (7% decline)
Market-Wide Circuit Breaker Decline Level 2	20	12	Text	Market Wide Circuit Breaker Decline Level 2 Breached (13% decline)
Market-Wide Circuit Breaker Decline Level 3	21	12	Text	Market Wide Circuit Breaker Decline Level 3 Breached (20% decline)
Market-Wide Circuit Breaker Status	22	1	Numeric	 Informs participants and the UTP data recipients when a MWCB has breached one of the established levels. The MWCB Status message will be generated once for each level if the S&P 500 declines past the established breaker decline level for the trading day. 1 = MWCB Level 1 2 = MWCB Level 2 3 = MWCB Level 3
Message Text	23	8000	Text	Provides description of administrative message.

CLIENT SPECIFICATION

APPENDIX A: BBO QUALIFYING CONDITIONS

Table 12 contains the quote conditions that are eligible to be the best bid or offer.**Source:** <u>CTA Specifications</u>

Table 12 BBO Qualifying Conditions

BBO QUALIFYING QUOTE CONDITIONS
Slow Quote on the Offer Side
Slow Quote on the Bid Side
Slow Quote on the Bid and Offer Sides
Opening Quote
Regular Quote (FINRA –Market Marker Open)
Slow Quote due to a Set Slow list on both the Bid and Offer sides

APPENDIX B: NYSE STOCK SYMBOL SUFFIXES

Table 13 NYSE Stock Symbol Suffixes - Reference: <u>Appendix G</u> in the <u>CTA Specifications</u> for the list of allowable symbol suffixes

SUFFIX	DESCRIPTION
<v></v>	<v> represents a character; Series (or Class) A-T & V-Z; Examples include the following: ZZZ A is the</v>
w.	same as ZZZ/A ZZZ T is the same as ZZZ/T
<v>CL</v>	Series (or Class) A-T & V-Z Called. Examples include the following: ZZZ ACL is the same as ZZZ/A/CL
<v>CV</v>	Series (or Class) A-T & V-Z Convertible. Examples include the following: ZZZ ACV is the same as ZZZ/A/CV
<v>WI</v>	Series (or Class) A-T & V-Z When Issued. Examples include the following: ZZZ AWI is the same as ZZZ/Aw
CL	Called. Examples include the following: ZZZ CL is the same as ZZZ/CL
СТ	Certificates. Examples include the following: ZZZ CT is the same as ZZZ/CT
CV	Convertible. Examples include the following: ZZZ CV is the same as ZZZ/CV (ZZZ/CV)
CVR	Contingent Value Right. Examples include the following: ZZZ CVR is the same as ZZZ/CVR
CVCL	Convertible Called. Examples include the following: ZZZ CVCL is the same as ZZZ/CV/CL
DP	Amount of most-recent dividend to go "ex-distribution". Examples include the following: ZZZ DP is the same as ZZZ/DP
DV	Accumulated dividend per share, net of expenses, through and including the previous day's close of trading. Examples include the following: ZZZ DV is the same as ZZZ/DV
EC	Emerging Company Marketplace. Examples include the following: ZZZ EC is the same as ZZZ/EC
EU	Estimated cash amount for creation unit. Examples include the following: ZZZ EU is the same as ZZZ/EU
FN	Foreign News. Examples include the following: ZZZ FN is the same as ZZZ/F/N
ID	Index – differentiates an index from a stock with the same root symbol. Examples include the following: III ID is the same as III/ID
IV	Intra-day Net Asset Value per share. Examples include the following: ZZZ IV is the same as ZZZ/IV
NV	Net Asset Value per share, as of the close on the previous trading day. Examples include the following: ZZZ NV is the same as ZZZ/NV
РР	Partial Paid. Examples include the following: ZZZ PP is the same as ZZZ/PP
PTCL	Part Called. Examples include the following: ZZZ PTCL is the same as ZZZ/PT/CL
PR	Preferred. Examples include the following: ZZZ PR is the same as ZZZp
PR <v></v>	<v> represents a character; Preferred Series A-T & V-Z. Examples include the following: ZZZ PRA is the same as ZZZpA ZZZ, PRB is the same as ZZZpB</v>
PR <v>CL</v>	<v> represents a character; Preferred Series A-T & V-Z Called. Examples include the following: ZZZ PRACL is the same as ZZZpA/CL ZZZ, PRBCL is the same as ZZZpB/CL</v>
PR <v>CV</v>	<v> represents a character; Preferred Series A-T & V-Z Convertible. Examples include the following: ZZZ PRACV is the same as ZZZpA/CV ZZZ, PRBCV is the same as ZZZpB/CV</v>
PR <v>WI</v>	<v> represents a character; Preferred Series A-T & V-Z When Issued. Examples include the following: ZZZ PRAWI is the same as ZZZpAw ZZZ, PRBWI is the same as ZZZpBw</v>
PRWI	Preferred When Issued. Examples include the following: ZZZ PRWI is the same as ZZZpw
PRCL	Preferred Called. Examples include the following: ZZZ PRCL is the same as ZZZp/CL
PRCV	Preferred Convertible. Examples include the following: ZZZ PRCV is the same as ZZZp/CV

APPENDIX B: NYSE STOCK SYMBOL SUFFIXES

Table 13 NYSE Stock Symbol Suffixes

SUFFIX	DESCRIPTION
PRC <v></v>	Indicates Class A; could also be B-K and M-S; Second Category of Preferred. Examples include the following: ZZZ PRCA is the same as ZZZpCA ZZZ, PRCB is the same as ZZpCB
RT	Rights. Examples include: ZZZ R is the same as ZZZr
RWI	Rights When Issued. Examples include: ZZZ RWI is the same as ZZZrw
SC	Small Corporate Offering Registration. Examples include the following: ZZZ SC is the same as ZZZ/SC
SP	Special. Examples include the following: ZZZ SP is the same as ZZZ/SP
SD	Stamped. Examples include the following: ZZZ SD is the same as ZZZ/SD
SO	Current Shares Outstanding, in thousands. Examples include the following: ZZZ SO is the same as ZZZ/SO
тс	Total cash amount per creation unit, in thousands. Examples include the following: ZZZ TC is the same as ZZZ/TC
TEST	Exclusive suffix used for intraday test message. Examples include the following: ZZZ TEST is the same as ZZZ/TEST
TT	Tier II Securities. Examples include the following: ZZZ TT is the same as ZZZ/TT
U	Units (a combination of securities composed of two or more of warrants, common stocks, preferred stocks and/or bonds). Examples include the following: ZZZ U is the same as ZZZ/U
VR	Variable Common Rights. Examples include the following: ZZZ VR is the same as ZZZ/VR
WD	When Distributed. Examples include the following: ZZZ WD is the same as ZZZ/WD
WI	When Issued. Examples include the following: ZZZ WI is the same as ZZZw
WS	Warrants. Examples include the following: ZZZ WS is the same as ZZZ/WS
WWS	With Warrants. Examples include the following: ZZZ WWS is the same as ZZZ/W/WS
WS <v></v>	Warrants Series <v>; Series A-T & V-Z. Examples include the following: ZZZ WSA is the same as ZZZ/WSA</v>
WSWI	Warrants When Issued

Table 13 Suffix Definitions

SUFFIX	DEFINITION
Called	An issue being redeemed by its issuing corporation under definite conditions before maturity.
Certificate	Refers to a negotiable certificate representing deposit of stock with a pending change in its condition.
Convertible	A preferred share which its owner may convert into common stock or another security, usually in the same company, in accordance with the terms of issue.
Preferred	A class of stock with priority over common stock in regard to earnings and/or liquidations.
Rights	Represent the privilege to subscribe (in proportion to the number of shares owned) to new or additional securities, usually at or below the current market price. Rights ordinarily have market values of their own and are traded actively. In most cases they must be exercised within a relatively short period of time.
Stamped	Indicates rights and privileges different from securities of the same issue, class, or series not stamped.
Warrant	Indicates a certificate giving its holder the right to purchase securities at a stipulated price, either within a specified time limit or in perpetuity.
When Distributed	Signifies a short form of "when, as, and if distributed" (see 'When Issued').
When Issued	Means a short form of "when, as, and if issued"; indicates a transaction in a security authorized for issuance, but not yet issued. All "When Issued" transactions are on an "if" basis, to be settled if and when the actual security is issued.
With Warrants	A security with a warrant attached that entitles the holder to purchase another security at stipulated price(s), either within a specified time or in perpetuity. Warrants may be immediately detachable from their underlying securities or detachable after specified periods.
Without Warrants	A security from which the warrant(s) has been removed.

APPENDIX C: NASDAQ STOCK SYMBOL SUFFIXES

Source: Nasdaq Website

http://www.nasdaqtrader.com/content/technicalsupport/specifications/dataproducts/nasdaqfifthcharactersuffixlist.pdf http://www.nasdaq.com/reference/glossary.stm http://www.nasdaqtrader.com/Trader.aspx?id=SymbolDirDefs

Table 14 NASDAQ Stock Symbol Suffixes

SUFFIX	DESCRIPTION
Α	Class A
В	Class B
С	Issuer qualification exception – the issuer has been granted a continuance in NASDAQ under an exception to the qualification standards for a limited period.
D	New
Е	Delinquent in required filings with the SEC
F	Foreign
G	First convertible bond
н	Second convertible bond, same company
I	Third convertible bond, same company
J	Voting
К	Nonvoting
L	Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units
М	Fourth preferred, same company
Ν	Third preferred, same company
0	Second preferred, same company
Р	First preferred, same company
Q	Bankruptcy - the issuer is involved in bankruptcy proceedings.
R	Rights
S	Shares of beneficial interest
Т	With warrants or with rights
U	Units
v	When-issued and when-distributed
w	Warrants
Y	ADR (American Depositary Receipt)
Z	Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units

Table 15 NYSE Industry Codes

NDUSTRY GROUP	SECTOR	DIVISION	CODE
ndustrials			100
	Aerospace		102
		Aircraft	102A
		Parts and Equipment	102B
	Business Supplies and Services		104
		Machines and Equipment (Excl. Computers)	104A
		Supplies	104B
		Services	104C
	Chemicals		106
		Diversified Chemicals	106A
		Specialized	106B
	Computers, Data Processing		108
		Computer Systems	108A
		Data Processing, Software	108B
		Peripheral Devices and Supplies	108C
	Construction		110
		Residential	110A
		Industrial	110B
		Cement	110C
		Lumber, Wood	110D
		Other Building Materials and Products	110E
	Electrical Equipment		112
	Electronics		114
		Semi Conductors and Other Components	114A
		Telecommunications Equipment	114B
		Test, Control Instruments and	114C

An Intercontinental Exc INDUSTRY GROUP	hange Company SECTOR	DIVISION	CLIENT SPECIFICATION CODE
	SECTOR	Systems	CODE
		Other Systems and Equipment	114D
	Environmental Control		116
	Foods, Beverages		118
		Beverages	118A
		Branded Food Products	118B
		Processing and Production	118C
		Wholesalers	118D
	Health and Beauty Products		120
		Personal Health Products	120A
		Toiletries, Cosmetics, Perfumes	120B
	Health Care Services		122
		Equipment and Supplies	122A
		Health Care Facilities	122B
	Household Goods		124
		Appliances	124A
		Furnishings and Fixtures	124B
		Housekeeping Products	124C
		House-wares	124D
	Industrial Machinery and Equipment		126
		Heavy Machinery	126A
		Machine Tools	126B
		Measuring and Control Devices	126C
		Transmissions and Engines	126D
		Other Industrial Equipment	126E
	Lodging, Restaurants		128
		Hotels, Motels	128A
		Restaurants	128B
	Mining, Refining, Fabricating		130
		Aluminum	130A

n Intercontinental Exch NDUSTRY GROUP	nange Company SECTOR	CLIENT	SPECIFICATION CODE
		Coal	130B
		Gold, Silver	130C
		Steel, Iron	130D
		Other Non-Ferrous Metals	130E
	Motor Vehicles		132
		Auto and Truck	132A
		Parts and Equipment	132B
	Oil and Gas		134
		Crude Production	134A
		Contract Drilling, Exploration	134B
		Integrated Domestic Refiners	134C
		Integrated International Refiners	134D
		Non-Integrated Refiners	134E
		Services and Equipment	134F
	Packaging		136
		Glass	136A
		Metal	136B
		Paper	136C
		Other	136D
	Paper Production		138
	Pharmaceuticals		140
	Publishing		142
		Newspaper Chains	142A
		Magazines	142B
		Books	142C
	Recreation Services and Products		144
		Broadcasting	144A
		Gaming Operations and Services	144B
		Leisure Time Products	144C
		Motion Pictures, Entertainment	144D

An Intercontinental Exch INDUSTRY GROUP	nange Company SECTOR	CLIENT	SPECIFICATION CODE
		Services	
		Outdoor Recreational Vehicles and Equipment	144E
	Retail Trade		146
		Department Store Chains	146A
		Discount Variety Chains	146B
		Drug Store Chains	146C
		Supermarkets, Food Stores	146D
		Hardware, Furniture Stores	146E
		Specialty Apparel Ships	146F
		Other Retail Operations	146G
	Textiles, Apparel		148
		Textile and Mill Products	148A
		Clothing Companies	148B
		Shoes	148C
	Tires, Rubber		150
	Tobacco		152
	Wholesalers, Distributors		154
		Consumer Products (Non-Food)	154A
		Industrial Products	154B
	Multi-Industry		170
	Other		180
		Manufacturing	180A
		Services	180B
Transportation			200
	Air		202
		Passenger Airlines	202A
		Freight Airlines	202B
	Rail		204
	Trucking		206

Intercontinental Exch	SECTOR	DIVISION	PECIFICATIO
	Other Transportation Services		208
Utilities			300
	Electric Services		302
	Gas Services		304
		Distribution and Integrated Natural Gas Cos.	304 <i>A</i>
		Natural Gas Transmission Companies	3041
		Other Gas Services	3040
	Telecommunications		306
	Water Supply Companies		308
	Multi-Service Companies		310
			400
	Banks		402
		Multinational	402
		Regional	402
		Savings and Loan Associations	4020
	Brokerage Services		404
	Closed-End Investment Companies		406
		Bond Funds	406
		Stock Funds	406
		Specialty Funds	406
	Finance Companies		408
	Insurance		410
		Brokers, Agents	410
		Carriers	410
	Travete	Garriers	
	Trusts	Real Estate Investment Trusts (REITS)	412 412
		Oil Royalty Trust	412
		Other Trusts	4120
	RealEstate		414
	Diversified Financial Services		416

APPENDIX E: PARTICIPANT ID

Table 16 The Participant ID is 1 text, Alphabetic character field, which identifies the Exchange or Processor thatinitiated the message:

CODE	Description
А	NYSE MKT LLC
В	NASDAQ OMX BX, Inc.
С	National Stock Exchange Inc. (NSX)
D	Financial Industry Regulatory Authority, Inc. (FINRA ADF)
I	International Securities Exchange, LLC (ISE)
J	Bats EDGA Exchange, INC
К	Bats EDGX Exchange, Inc.
М	Chicago Stock Exchange, Inc. (CHX)
Ν	New York Stock Exchange LLC
Р	NYSE Arca, Inc.
S	Consolidated Tape System
Т	NASDAQ Stock Exchange, LLC (in Tape A, B securities)
Q	NASDAQ Stock Exchange, LLC (in Tape C securities)
V	The Investors' Exchange, LLC (IEX)
W	Chicago Broad Options Exchange, Inc.(CBOE)
Х	NASDAQ OMX PSX, Inc. LLC
Y	Bats BYX Exchange, Inc.
Z	Bats BZX Exchange, Inc.