

Form 1 Page 1 Execution Page	U.S. SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549	Date filed (MM/DD/YY) 04/10/18	OFFICIAL USE ONLY
APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT			

WARNING: Failure to keep this form current and to file accurate supplementary information on a timely basis, or the failure to keep accurate books and records or otherwise to comply with the provisions of law applying to the conduct of the applicant would violate the federal securities laws and may result in disciplinary, administrative or criminal action.

INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS
MAY CONSTITUTE CRIMINAL VIOLATIONS

APPLICATION AMENDMENT



18002251

1. State the name of the applicant: Cboe BZX Exchange, Inc.
2. Provide the applicant's primary street address (Do not use a P.O. Box):
400 South LaSalle Street
Chicago, Illinois 60605
3. Provide the applicant's mailing address (if different):

4. Provide the business telephone and facsimile number:
(913) 815-7000 (Telephone) (913) 815-7119 (Facsimile)
5. Provide the name, title and telephone number of a contact employee:
Anders Franzon SVP, Deputy General Counsel, Cboe BZX Exchange, Inc. (913) 815-7154
(Name) (Title) (Telephone Number)
6. Provide the name and address of counsel for the applicant:
Pat Sexton
400 S. LaSalle Street
Chicago, IL 60605
7. Provide the date that applicant's fiscal year ends: December 31
8. Indicate legal status of the applicant: Corporation Sole Partnership Partnership
 Limited Liability Company Other (specify): _____

If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant entity was formed):
(a) Date (MM/DD/YY): 11/01/07 (b) State/Country of formation: Delaware/United States of America
(c) Statute under which applicant was organized: General Corporation Law of the State of Delaware

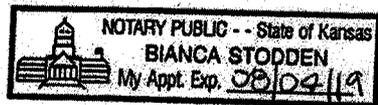
EXECUTION:

The applicant consents that service of any civil action brought by, or notice of any proceeding before, the Securities and Exchange Commission in connection with the applicant's activities may be given by registered or certified mail or confirmed telegram to the applicant's contact employee at the main address, or mailing address if different, given in Items 2 and 3. The undersigned, being first duly sworn, deposes and says that he/she has executed this form on behalf of, and with the authority of, said applicant. The undersigned and applicant represent that the information and statement contained herein, including exhibits, schedules, or other documents attached hereto, and other information filed herewith, all of which are made a part hereof, are current, true and complete.

Date: 04/10/18 Cboe BZX Exchange, Inc.
(MM/DD/YY) (Name of Applicant)
By: [Signature] Kyle Murray, Associate General Counsel
(Signature) (Printed Name and Title)
Subscribed and sworn before me this 10th day of April, 2018 by Bianca Stodden
(Month) (Year) (Notary Public)
My Commission expires 08/04/19 County of Johnson State of Kansas

This page must always be completed in full with original, manual signature and notarization.
Affix notary stamp or seal where applicable.

RECEIVED
APR 11 PM 3:54
SEC/TM





April 10, 2018

Via Federal Express

Ms. Jeanette Marshall
Securities and Exchange Commission
Division of Trading and Markets
100 F Street, N.E.
Mail Stop 6628
Washington, DC 20549-0001

SEC
Mail Processing
Section
APR 11 2018
Washington DC
415

Re: **Cboe BZX Exchange, Inc.
Form 1 Amendment**

Dear Jeanette:

On behalf of Cboe BZX Exchange, Inc. (or the "Exchange"), and in connection with the Cboe Form 1 that is on file with the Securities and Exchange Commission ("Commission"), enclosed please find one original and two copies of the Execution Page to Form 1 as well as the following exhibits:

- Exhibit F (updated to include the most recent, final versions of agreements circulated to Members and other Users of the Exchange)
- Exhibit M (updated to provide a list of firms currently approved as members or other users of the Exchange)

This amendment is filed in accordance with SEC Rule 6a-2 and is intended to replace Exhibits F and M currently on file with the Commission. Please do not hesitate to contact me if you have any questions or require anything further.

Sincerely,

Kyle Murray
Assistant General Counsel

Enclosures

RECEIVED
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SEC/TM

Exhibit F

Exhibit Request:

A complete set of all forms pertaining to:

1. Application for membership, participation or subscription to the entity,
2. Application for approval as a person associated with a member, participant or subscriber of the entity, and
3. Any other similar materials.

Response:

Attached please find the following documents:

- Service Bureau Information Document, Service Bureau Agreement
- Data Feed Order Form and System Description, U.S. Market Data Policies

The Exchange intends to use Form U-4, the Uniform Application for Securities Industry Registration or Transfer, for persons applying to be associated persons of a Member.

Service Bureau Application and Agreements

SERVICE BUREAU INFORMATION			
Firm:			
Address:			
City:		State:	Zip:
BUSINESS CONTACT		TECHNICAL CONTACT	
Name:		Name:	
Email:		Email:	
Phone:		Phone:	
BILLING ADDRESS		BILLING CONTACT	
Firm:		Name:	
Address:		Email:	
City:	State:	Zip:	Phone:

ACCOUNT ADMINISTRATORS
<p>A Service Bureau must designate an Account Administrator who will be authorized to grant permission and user access within the Cboe Customer Web Portal. More than one Account Administrator may be designated and there is not a maximum number of Account Administrators allowed per Service Bureau. Account Administrators will be able to grant access to tools within the Customer Web Portal including, but not limited to, historical market data subscriptions, logical port request, modify or delete form, physical connection request form, and invoices and billing files.</p>

Name:	Title:
Email:	Phone:

Name:	Title:
Email:	Phone:

CONNECTIVITY
<p>Which connectivity option will you use? (check one)</p> <p> <input type="checkbox"/> Cross Connect* <input type="checkbox"/> Extranet: _____ <input type="checkbox"/> VPN (certification only) </p> <p> What type of connections are you requesting? <input type="checkbox"/> Certification <input type="checkbox"/> Production </p> <p>*If requesting a cross connect, a <u>Connectivity Services Agreement</u> is also required.</p>

AUTHORIZATION

This form is governed by all of the terms and conditions set forth in the Service Bureau Application and Agreements. The persons listed above are the only individuals authorized to order or update services at Cboe on behalf of the Service Bureau. Please contact Membership Services at 913.815.7002 or email MembershipServices@cboe.com to add or delete authorized contacts.

Cboe provides a best effort attempt to cancel all open orders from a Member/Service Bureau upon a communications disconnect. There is no guarantee that the automatic cancel feature provided by Cboe will be error free or operate without interruption. By signing below, you agree and acknowledge that Cboe is not liable or responsible in any way for any orders which may fail to be cancelled using the automatic cancel feature. **Members may call the Cboe Trade Desk at 913.815.7001 to verbally request that all open orders be cancelled or check the status of open orders.**

Printed Name:

Signature:

Title:

Date:

Service Bureau Agreement

1. This Service Bureau Agreement (this "Agreement") is by and among each of Cboe BZX Exchange, Inc. ("BZX"), Cboe BYX Exchange, Inc. ("BYX"), Cboe EDGA Exchange, Inc. ("EDGA"), Cboe EDGX Exchange, Inc. ("EDGX"), Cboe Exchange, Inc. ("Cboe") and Cboe C2 Exchange, Inc. ("C2" and collectively with BZX, BYX, EDGA, EDGX and Cboe, the "Exchange"), with principal offices at 400 S. LaSalle Street, Chicago, Illinois 60605, the Member or Trading Permit Holder (as applicable) of the Exchange designated below (collectively, "Member"), and the Authorized Service Bureau designated below ("Service Bureau").
2. The Service Bureau acknowledges that it is a party to a Service Bureau Port Fee Agreement with the Exchange.
3. This Agreement authorizes the Service Bureau to route orders and any modifications thereto to the Exchange on behalf of the Member.
4. By executing this Agreement, the undersigned Member agrees that it is responsible for all orders using its MPID/EFID entered on the Exchange through or by the Service Bureau. The Member also agrees to accept and honor all trades executed on the Exchange as a result of orders routed to the Exchange through or by the Service Bureau using the Member's mnemonic, regardless of whether such orders were provided to the Exchange in error by the Service Bureau.
5. The Member understands and agrees that it is its sole responsibility to immediately notify the Exchange in the event that it wishes to terminate this Agreement.
6. This Agreement, subject to earlier termination in accordance with its terms, shall continue until it is terminated at any time on not less than 24 hours written notice given by either party to the other.
7. This Agreement shall be governed by the laws of the state of New York without regard to its choice of law provisions.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED THIS SERVICE BUREAU AGREEMENT EFFECTIVE AS OF THE DATE OF EXECUTION BY THE EXCHANGE SET FORTH BELOW.

Service Bureau:

Member:

Cboe BZX Exchange, Inc.;
Cboe BYX Exchange, Inc.;
Cboe EDGA Exchange, Inc.;
Cboe EDGX Exchange, Inc.;
Cboe Exchange, Inc.;
Cboe C2 Exchange, Inc.;

Signature

Signature

Signature

Printed Name

Printed Name

Printed Name

Title (must be an officer)

Title (must be an officer)

Title (must be an officer)

Name of Service Bureau

Name of Firm

Date

Service Bureau Contact

Date

Email Address of Contact Person

MPID or EFID of Member

This agreement should apply to the Exchanges noted below:

BZX BYX EDGA EDGX BZX Options EDGX Options Cboe C2

Cboe Global Markets Exchange Data Order Form and System Description

Initial Form
 Amended Form
 Add/Remove Data Feed Subscription

DATA RECIPIENT INFORMATION			
Company Name:			Date:
Address of Principal Office:			
City:	State:	Zip Code:	
BILLING ADDRESS			
Address of Billing Office:			
City:	State:	Zip Code:	
BUSINESS CONTACT	BILLING CONTACT*		
Name:	Name:		
Title:	Title:		
Email:	Email:		
Phone:	Fax:	Phone:	Fax:
MARKET DATA ADMINISTRATOR**	TECHNICAL CONTACT		
Name:	Name:		
Title:	Title:		
Email:	Email:		
Phone:	Fax:	Phone:	Fax:

*The Billing Contact will be assigned a web log-in to manage the Data Recipient's monthly invoices via the Website.

**The Market Data Administrator will be assigned a web log-in to manage the Data Recipient's monthly usage reporting.

How will you receive Cboe data?

Directly from Cboe or via an Extranet (complete Connectivity Section A)
 Through one or more Market Data Vendors (complete Connectivity Section B)
 Both (complete Connectivity Sections A and B)

CONNECTIVITY – SECTION A
Data Center Location: <input type="checkbox"/> Primary – Secaucus <input type="checkbox"/> Secondary – Chicago <input type="checkbox"/> PoP - Weehawken
Connection Type:
<input type="checkbox"/> New <input type="checkbox"/> Existing
<input type="checkbox"/> Direct Connection (Co-Lo / Long Haul) <input type="checkbox"/> 1G <input type="checkbox"/> 10G <input type="checkbox"/> Other: _____ Protocol <input type="checkbox"/> Multicast <input type="checkbox"/> TCP
<input type="checkbox"/> Extranet Service Provider
<input type="checkbox"/> NYSE (SFTI) <input type="checkbox"/> SAVVIS, Inc. <input type="checkbox"/> Options-IT <input type="checkbox"/> Other: _____

CONNECTIVITY – SECTION B

Please identify all Vendors through which you will receive Cboe Market Data:

DATA FEED SUBSCRIPTION / CHANGE REQUEST

U.S. Equities

BZX U.S. Equities Exchange (BZX Equities)

Data Feed	Add	Remove	Digital Media License***	Enterprise License***	Real-Time	Historical	Effective Date
BZX Depth (Multicast or TCP)	<input type="checkbox"/>						
BZX Top	<input type="checkbox"/>						
BZX Auctions	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
BZX Last Sale	<input type="checkbox"/>						
BZX Book Viewer	<input type="checkbox"/>						
BZX Summary Depth	<input type="checkbox"/>						

BYX U.S. Equities Exchange (BYX Equities)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
BYX Depth	<input type="checkbox"/>						
BYX Top	<input type="checkbox"/>						
BYX Last Sale	<input type="checkbox"/>						
BYX Book Viewer	<input type="checkbox"/>						
BYX Summary Depth	<input type="checkbox"/>						

EDGX U.S. Equities Exchange (EDGX Equities)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
EDGX Depth	<input type="checkbox"/>						
EDGX Depth Attributed	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		
EDGX Top	<input type="checkbox"/>						
EDGX Last Sale	<input type="checkbox"/>						
EDGX Book Viewer	<input type="checkbox"/>						
EDGX Summary Depth	<input type="checkbox"/>						

EDGA U.S. Equities Exchange (EDGA Equities)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
EDGA Depth	<input type="checkbox"/>						
EDGA Top	<input type="checkbox"/>						
EDGA Last Sale	<input type="checkbox"/>						
EDGA Book Viewer	<input type="checkbox"/>						
EDGA Summary Depth	<input type="checkbox"/>						

Aggregated U.S. Equities Feeds

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
Cboe One Summary (Multicast or TCP)	<input type="checkbox"/>						
Cboe One Premium (Multicast or TCP)	<input type="checkbox"/>						
Cboe ETF Implied Liquidity	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

***Digital Media and Enterprise Licenses apply only to Exchange Top, Last Sale, Book Viewer, Summary Depth, and Cboe One.

Options

Cboe Options Exchange (Cboe Options)

Data Feed	Add	Remove	Display Only License	Enterprise License	Real-Time	Historical	Effective Date
Cboe Book Depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Cboe BBO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	

DATA FEED SUBSCRIPTION / CHANGE REQUEST (continued)

Options (continued)

Cboe Options Exchange (Cboe Options)

Data Feed	Add	Remove	Display Only License	Enterprise License	Real-Time	Historical	Effective Date
Cboe COB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Cboe FLEX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	

C2 Options Exchange (C2 Options)

Data Feed	Add	Remove	Display Only License	Enterprise License	Real-Time	Historical	Effective Date
C2 Book Depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
C2 BBO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
C2 COB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	

BZX Options Exchange (BZX Options)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
BZX Options Depth	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BZX Options Top	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

EDGX Options Exchange (EDGX Options)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
EDGX Options Depth	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Top	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Auction	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Complex Depth	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Complex Top	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Complex Auction	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

Futures

Cboe Futures Exchange (CFE)

Data Feed	Add	Remove	Ancillary License****	Enterprise License*****	Real-Time	Historical	Effective Date
CFE Surface Quote	<input type="checkbox"/>						
CFE Book Depth	<input type="checkbox"/>						

****CFE Ancillary License can include Service Facilitator License, ISV License, News Service License, Television Display License, Spread Bet Contract and CFD License, and Unlimited Bulk Data Feed Distribution. Please identify the license type you are applying for in the System Description below.

*****CFE Enterprise License applies only to Non-Professionals.

Other

Non-Exchange Products

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
Cboe Crypto Feed Summary	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		
Cboe Crypto Feed Premium	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		

DATA FROM OPTIONS PRICING REPORTING AUTHORITY (OPRA)

Dissemination of Cboe Options data is limited to parties who have equivalent access to Consolidated Options Information disseminated by OPRA for the same classes or series of options that are included in the Proprietary Information. Access to consolidated Options Information and access to Proprietary Information are deemed "equivalent" if both kinds of information are equally accessible.

Indicate whether you currently receive data from OPRA: Yes No

If yes, please indicate which vendor provides your OPRA data: _____

I certify that the information provided within the System Description is accurate.

Signature of Data Recipient Authorized Representative

Title

Printed Name

Date



Cboe Global Markets
U.S. Market Data Policies

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U.S. Market Data Policies

Under the terms of the Cboe Global Markets U.S. Market Data Agreement (“**Data Agreement**”) with Cboe Data Services, LLC (“**CDS**”), firms receiving Exchange Data must adhere to these Cboe Global Markets U.S. Market Data Policies (the “**Market Data Policies**”). These Market Data Policies supplement and clarify the Data Agreement and covers the receipt, use, pricing, reporting, and distribution of Exchange Data. Unless otherwise specified, and except in the case of foreign currency trading data, references herein to “Exchange Data” refer to U.S. Exchange Data as defined in the Data Agreement. The Data Agreement governs any conflict with these Market Data Policies.

Pursuant to the Data Agreement, CDS reserves the right to update these Market Data Policies from time to time and will communicate any updates to Data Recipients via email and the Website. All capitalized terms used herein that are not defined below are defined in the Data Agreement or the applicable Fee Schedule.

As of the date of these Market Data Policies, the Exchanges covered by the Data Agreement and these Market Data Policies include the following:

(Cboe Exchange, Inc. (“Cboe Options”), Cboe C2 Exchange, Inc. (“C2”), Cboe Futures Exchange, LLC (“CFE”), Cboe BZX Exchange, Inc. (“BZX”), Cboe BYX Exchange, Inc. (“BYX”), Cboe EDGA Exchange, Inc. (“EDGA”), Cboe EDGX Exchange, Inc. (“EDGX”), Cboe FX Markets, LLC (“Cboe FX”), and Digital Asset Benchmark Administration, LLC (“DABA”))

The Market Data products offered by the following entities require a separate agreement and are not covered under these Market Data Policies:

- Cboe LiveVol, LLC
- Cboe Europe Limited

1 Definitions

Controlled Data Distributor – A Data Recipient that (i) provides Exchange Data to a Data User (either an Internal Subscriber or an External Subscriber) and (ii) controls the entitlements of and display of information to such Data User. If the Data User is either an employee or natural person independent contractor of the Controlled Data Distributor or an employee or natural person independent contractor of an affiliate of the Controlled Data Distributor identified on the List of Affiliates (*i.e.*, an Internal Subscriber), such Controlled Data Distributor is considered to be an “**Internal Controlled Data Distributor**.” If the Data User is not an employee or natural person independent contractor of the Controlled Data Distributor or of an affiliate thereof identified on the List of Affiliates (*i.e.*, an External Subscriber), such Controlled Data Distributor is considered to be an “**External Controlled Data Distributor**.”

Data Feed Subscriber – Any Data User not affiliated with Data Recipient that (a) receives Exchange Data from Data Recipient and (b) for which Data Recipient cannot substantially control Exchange Data for the purposes of reporting usage or qualification.

Display Usage – The access to and/or use of Exchange Data by a Data User via a graphical user interface, application or other medium which displays Exchange Data.

Extranet Service Provider - A Person that has entered into a Data Agreement and Transmits Exchange Data, via an extranet operated by such Person, to Data Recipients. “Transmit” means to direct Exchange Data to one or more Data Recipients without modification of the content, format or other characteristics of the Exchange Data. An Extranet Service Provider is not authorized to use or process Exchange Data for any purpose.

Non-Display Usage – Any method of accessing an Exchange Data product that involves access or use by a machine or automated device without access or use of a display by a natural person or persons.

Non-Professional Data User – A “Non-Professional User” is a natural person or qualifying trust that uses Data only for personal purposes and not for any commercial purpose and, for a natural person who works in the United States, is not: (i) registered or qualified in any capacity with the Securities and Exchange Commission, the Commodities Futures Trading Commission, any state securities agency, any securities exchange or association, or any commodities or futures contract market or association; (ii)

engaged as an “investment adviser” as that term is defined in Section 202(a)(11) of the Investment Advisors Act of 1940 (whether or not registered or qualified under that Act); or (iii) employed by a bank or other organization exempt from registration under federal or state securities laws to perform functions that would require registration or qualification if such functions were performed for an organization not so exempt; or, for a natural person who works outside of the United States, does not perform the same functions as would disqualify such person as a Non-Professional User if he or she worked in the United States.

Professional Data User - Any Data User other than a Non-Professional User.

Service Facilitator – A Person, other than an Extranet Service Provider, telecommunications provider, or ISV, that facilitates the receipt, dissemination, or other use of Exchange Data on behalf of the Data Recipient in accordance with the terms and conditions of the Data Agreement.

Uncontrolled Data Distributor – A Data Recipient that is authorized by CDS to distribute Exchange Data externally to a Data User that is not an affiliate of Data Recipient where the Data Recipient does not control the entitlements of and display of information to such Data User (i.e., a “Data Feed Subscriber”).

2 Display Requirements

Attribution

Each Data Recipient must clearly identify CDS as the source of any Exchange Data through use of the System name, or of the applicable Exchange on applicable displays of Exchange Data. Distributors of Exchange Data to Data Users must provide a prominent attribution message on all displays, including wall boards, tickers, mobile devices, and audio announcements on voice response services. In the case of a ticker, the attribution message should be interspersed with the Exchange Data at least every 90 seconds.

Quote/Last Sale Information Source	Required Attribution Message
BZX Depth, BZX Top, BZX Last Sale, or BZX Summary Depth	Cboe BZX Real-Time Quote, Cboe BZX Real-Time Last Sale or Cboe BZX Real-Time Price
BYX Depth, BYX Top, BYX Last Sale, or BYX Summary Depth	Cboe BYX Real-Time Quote, Cboe BYX Real-Time Last Sale or Cboe BYX Real-Time Price
EDGX Depth, EDGX Top, EDGX Last Sale, or EDGX Summary Depth	Cboe EDGX Real-Time Quote, Cboe EDGX Real-Time Last Sale or Cboe EDGX Real-Time Price
EDGA Depth, EDGA Top, EDGA Last Sale, or EDGA Summary Depth	Cboe EDGA Real-Time Quote, Cboe EDGA Real-Time Last Sale or Cboe EDGA Real-Time Price
Cboe One	Cboe One Real-Time Quote, Cboe One Real-Time Last Sale or Cboe One Real-Time Price ¹
Cboe ETF Implied Liquidity	Cboe ETF Implied Liquidity Quote
Cboe BBO, Cboe Depth, Cboe COB, Cboe CFLEX	Cboe Real-Time Quote, Cboe Real-Time Last Sale, Cboe Real-Time Price, Cboe COB Real-Time Quote, or Cboe CFLEX Real-Time Quote
C2 BBO, C2 Depth, C2 COB	C2 Real-Time Quote, C2 Real-Time Last Sale, C2 Real-Time Price, or C2 COB Real-Time Quote
CFE Top (Level 1), CFE PITCH (Level 2)	CFE Real-Time Quote, CFE Real-Time Last Sale or CFE Real-Time Price
Cboe Crypto Feed	Applicable Market Center Quote, Last Sale, or Price
Cboe FX US Depth	Cboe FX US Quote, Cboe FX US Rate
Cboe FX London Depth	Cboe FX London Quote, Cboe FX London Rate

If the Exchange Data is being provided on a delayed basis, the Data Recipient must appropriately notify Data Users that Exchange Data is delayed (e.g., “Data Delayed 15 Minutes”) through applicable attribution on the display. Alternatives for Exchange Data time delay notice attribution on displays may be permitted with the prior written approval of CDS if the alternative accurately and

¹ Firms that distribute CTA consolidated volume must comply with the [CTA Consolidated Volume Policy](#) as provided on the [CTA Plan website](#).

unambiguously describes the duration of the delay of the Exchange Data. Requests for alternative notice text may be made via email to marketdata@cboe.com.

Data Recipients that provide options Exchange Data must ensure that their Subscribers have Equivalent access to Consolidated Options Information disseminated by the Options Price Reporting Authority ("OPRA"), for those classes or series of options that are included in the Exchange Data for which OPRA also disseminates Consolidated Options Information (for purposes hereof, "Consolidated Options Information" means consolidated last sale reports combined with either consolidated quotation information or the best bid or offer ("BBO") furnished by OPRA, and access to Consolidated Options Information and access to options Exchange Data are deemed "Equivalent" if both kinds of information are equally accessible on the same terminal or work station).

Data Recipients that provide CFE Exchange Data as a News Service Data distribution may only include the Cboe Volatility Index (VX) Futures and/or XBT Futures front-month or front week contracts as part of the display. For purposes of the display, authorized devices of subscribers may include software applications and/or platforms outside of a traditional website.

Marketing Materials

Each Data Recipient may use CDS' corporate name, the names of CDS' market data products, and the trademarks set forth in the Brand Standards Manual (available through contacting Market Data Services at marketdata@cboe.com) in any marketing, publicity or advertising materials related to the business of the Data Recipient, *provided that such use is solely* for purposes of exercising Data Recipient's rights under the Data Agreement and is in compliance with the guidelines set forth in the Brand Standards Manual.

3 Record Retention Requirements

Each Data Recipient must create and maintain for at least 3 years or other timeframe specified in accordance with Regulatory Requirements, whichever is greater, complete and accurate books and records relating to the Data Recipient's performance of its obligations and exercise of its rights under the Data Agreement, including without limitation the receipt, use, display and distribution of Exchange Data and the administration of the Subscriber Agreement or equivalent, if applicable.

4 Data Recipient Approval & Notice Requirements

Each Data Recipient that is requesting Exchange Data must complete and submit to CDS the following: (i) Data Agreement (with the exception of Data Feed Subscribers of bulk CFE Exchange Data), (ii) List of Affiliates (if applicable); (iii) Exchange Data Order Form and System Description; and (iv) Service Facilitator List (if applicable). The Exchange Data Order Form and System Description require firms to identify the Exchange Data desired, and the Exchange Data access method, and to provide key contact information as well as a description of any system(s) or service(s) that make use of or distribute Exchange Data internally or externally to Data Users.

Each completed Data Agreement, List of Affiliates, Exchange Data Order Form and System Description, and Service Facilitator List should be emailed to marketdata@cboe.com for approval.

Any notice by Data Recipient under the Data Agreement should be directed to CDS at:

Cboe Data Services, LLC
17 State Street, 31st Floor
New York, NY 10004
Attention: Market Data Services
Email: marketdata@cboe.com
Phone: 212-378-8821

With a copy to: legalnotices@cboe.com

5 Distribution to Affiliates of Data Recipient

Any Data Recipient that distributes Exchange Data to one or more of its affiliates must complete and submit the List of Affiliates showing the affiliate(s) receiving Exchange Data.

One or more of the entities (each a “Connected Entity”) that is part of the group comprised of the Data Recipient and the affiliates listed on the List of Affiliates (collectively, the “Affiliate Group”) is permitted to own connectivity with CDS to receive Exchange Data directly from CDS. Each Connected Entity shall be identified in writing to CDS. Any member of the Affiliate Group that also receives Exchange Data indirectly from another Data Recipient (in addition to a Connected Entity) that is an Uncontrolled Data Distributor is not required to complete and return to CDS a separate Data Agreement and Exchange Data Order Form and System Description. Rather that entity is bound by the same Data Agreement and other relevant documents executed by the applicable member of the Affiliate Group.

6 Uncontrolled Data Distributor Requirements

To become an Uncontrolled Data Distributor, the Data Recipient must describe, using the Exchange Data Order Form and System Description, its plan to distribute Exchange Data externally to any Data Feed Subscriber that is not an affiliate of the Data Recipient.

Request Process

Uncontrolled Data Distributors are responsible for either (i) directing each prospective Data Feed Subscriber to download the required documents from the Website, or (ii) providing a hard copy of each required document to the prospective Data Feed Subscriber. Required documents include the following:

- Signed Data Agreement (with the exception of Uncontrolled Data Distributors of bulk CFE Exchange Data to Data Feed Subscribers for Internal Distribution only.)
- Completed and signed Exchange Data Order Form and System Description
- Completed and signed List of Affiliates (if applicable)
- Completed and signed Service Facilitator List (if applicable)

Approval Process

After the required documents have been completed, the prospective Data Feed Subscriber must submit the required documents to CDS (as described above) for approval. CDS will review the documents and may contact the Data Feed Subscriber directly for additional information. The review of the documents includes, but is not limited to, a review of the intended use of the Exchange Data and the entitlements.

Upon approval, CDS will notify both the Data Feed Subscriber and the Uncontrolled Data Distributor via email. Once approved by CDS, the Uncontrolled Data Distributor is authorized to provide the approved Exchange Data to the Data Feed Subscriber. **A new Data Feed Subscriber may not receive Exchange Data unless and until CDS has specifically approved the distribution of the requested Exchange Data product.** Please note that if an Uncontrolled Data Distributor provides Exchange Data to an unapproved Data Feed Subscriber or releases any Exchange Data prior to CDS' approval, the Uncontrolled Data Distributor is responsible for paying CDS any fees and other charges that would have been assessed such Data Feed Subscriber during the unauthorized time frame had the Data Feed Subscriber and release of Exchange Data to such Data Feed Subscriber been approved.

7 Uncontrolled Data Distributor Reporting

CDS requires all Uncontrolled Data Distributors of Exchange Data to submit reports, on a monthly basis, providing firm and Exchange Data details (as described below) for each Data Feed Subscriber receiving the Exchange Data. Each such report must include the following:

- Each Data Feed Subscriber's name, contact information, and billing address
- Address at which each Data Feed Subscriber receives the Exchange Data

- Exchange (BZX, BYX, EDGA, EDGX, Cboe Options, C2, CFE, Cboe FX US, Cboe FX London or the applicable product name if the Exchange Data is an aggregate of multiple Exchanges or Systems) and type of Exchange Data subscribed to by each Data Feed Subscriber (e.g., Depth, Top, Last Sale, Summary Depth)
- Authorized Users and Devices for Data Feed Subscribers of bulk CFE Exchange Data.
- The earliest date upon which each Data Feed Subscriber received or will receive such Exchange Data from the Uncontrolled Data Distributor (installation date)
- The last date upon which each Data Feed Subscriber received or will receive such Exchange Data from the Uncontrolled Data Distributor (termination date)

Uncontrolled Data Distributors may report to CDS by entering details directly into the reporting system designated by CDS or via upload files in CSV format. Monthly reporting for the prior month's activity is due on the 15th of the current month (i.e., August 15th is the due date for July reporting).

Unless otherwise provided by CDS, Uncontrolled Data Distributor shall use reasonable efforts to provide such reporting within 15 days of the end of the applicable reporting period. Failure to report within 60 days of the end of the applicable reporting period may result in suspension or termination of provision of Exchange Data to Uncontrolled Data Distributor.

Please contact marketdata@cboe.com if you have any questions about reporting requirements. If you are newly reporting to CDS, a user login will be created for you to access the system.

8 Controlled Data Distributor Requirements

Internal Controlled Data Distributors

Internal Controlled Data Distributors may provide Exchange Data to employees or natural person independent contractors of the Internal Controlled Data Distributor or any affiliate thereof (i.e., Internal Subscribers) identified on a List of Affiliates submitted by the Internal Controlled Data Distributor to CDS.

Internal Controlled Data Distributors are not required to execute a Subscriber Agreement or equivalent with Internal Subscribers. Only a Data Agreement, List of Affiliates (if applicable) and Exchange Data Order Form and System Description completed by the Internal Controlled Data Distributor is required to be submitted to CDS.

External Controlled Data Distributors

External Controlled Data Distributors must execute a Subscriber Agreement **or equivalent** with each External Subscriber, whether an individual or a firm (except for Trial Users as defined below and Floor Broker Users as defined in the applicable Fee Schedule). CDS will not execute this agreement or equivalent with an External Controlled Data Distributor's customers.

External Controlled Data Distributors must administer Subscriber Agreements to all External Subscribers. If an External Controlled Data Distributor opts not to administer a Subscriber Agreement, then the External Controlled Data Distributor is required to indemnify CDS in the event of a claim by an External Subscriber or otherwise.

External Controlled Data Distributors have four options to administer the Subscriber Agreement **or equivalent**.

Administration Options for the Subscriber Agreement	
1. Data Recipient Indemnification	Data Recipient administers its own agreement to External Subscribers as an equivalent to the Subscriber Agreement. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.
2. Incorporation by Reference	Data Recipient adds specific language referring to the Subscriber Agreement into the Data Recipient's own agreement with the External Subscriber. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.

3. Online Click-Through Subscriber Agreement	Data Recipient offers the agreement via the Internet. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.
4. Hard Copy Subscriber Agreement	Data Recipient provides External Subscriber with a paper copy of the Subscriber Agreement. Data Recipient retains executed originals, but does not submit the agreement to CDS.

Option 1 – Data Recipient Indemnification

Section 12 of the Data Agreement permits External Controlled Data Distributors to choose to indemnify CDS in lieu of administering the Subscriber Agreement to each External Subscriber.

External Controlled Data Distributors that opt for indemnification are required to include certain basic protections and rights in their own legally enforceable Data Recipient customer agreements that ensure CDS is protected to the same extent as if the External Controlled Data Distributors had administered the Subscriber Agreement with each External Subscriber. An External Controlled Data Distributor may then provide the Exchange Data immediately after administering its own customer agreement with the External Subscriber.

External Controlled Data Distributors that opt for indemnification must follow these guidelines:

1. Prior to distributing the Exchange Data, the External Controlled Data Distributor will have in place a legally valid and enforceable Data Recipient customer agreement with the External Subscriber that (i) establishes the rights and obligations of the External Subscriber with respect to Exchange Data provided by the External Controlled Data Distributor, including any limitations on the External Subscriber's right to redistribute the Exchange Data, and (ii) protects the CDS Indemnified Parties (as defined in the Data Agreement) to the same extent as if the External Controlled Data Distributor had presented and the External Subscriber had signed the Subscriber Agreement.
2. In terms of recordkeeping and retention, Data Recipient customer agreements are subject to requirements specified within Section 3 of these Market Data Policies and as specified within the Data Agreement. In the event of a dispute with External Subscriber(s) relating to the Exchange Data, the External Controlled Data Distributor agrees to provide CDS with copies of the relevant Data Recipient customer agreements.
3. External Controlled Data Distributor must indemnify all CDS Indemnified Parties and any third parties against any Claims and Losses relating to the Exchange Data made by an External Subscriber who receives the Exchange Data from the External Controlled Data Distributor (or any person relying upon the Exchange Data received by such External Subscriber) arising from External Controlled Data Distributor's election to distribute Exchange Data to such External Subscriber under a Data Recipient customer agreement rather than under a Subscriber Agreement.

Option 2 – Incorporation by Reference

In lieu of including the exact language of the Subscriber Agreement in the Data Recipient customer agreement with each Subscriber, External Controlled Data Distributors may choose to incorporate necessary language protecting CDS by referring to the Subscriber Agreement in their own legally valid and enforceable Data Recipient customer agreement, and in addition, providing a copy of the Subscriber Agreement to the Subscriber. Thus, by signing the Data Recipient customer agreement, External Subscribers also assent to necessary Subscriber Agreement terms.

External Controlled Data Distributors that opt for "Incorporation by Reference" must follow these instructions:

1. Include the language below prominently on the signature page of the Data Recipient customer agreement. Prior to including this language in the Data Recipient customer agreement, in the blank provided, insert the term in the Data Recipient customer agreement that refers to the person receiving the information (*i.e.*, customer, account holder, subscriber, member, etc.).

By executing this Agreement, _____, (known as "Subscriber" in the Subscriber Agreement) agrees that:

- a. it has read and agrees to be bound by the Subscriber Agreement, a copy of which is attached hereto;
 - b. the Data Recipient/Vendor (i) is not an agent of Cboe Data Services, LLC; (ii) is not authorized to add to or delete any terms or provisions from the Subscriber Agreement; and (iii) is not authorized to modify any provision of the Subscriber Agreement; and
 - c. no provision has been added to or deleted from the Subscriber Agreement and that no modifications have been made to it. Both the Subscriber and the person executing on behalf of the Subscriber warrant that the Subscriber is legally able to undertake the obligations set forth therein and the signatory is duly authorized to bind the Subscriber to the Subscriber Agreement.
2. Provide each External Subscriber with a copy of the Subscriber Agreement at the time of executing the Data Recipient customer agreement.

Once the Data Recipient customer agreement is signed by both the External Subscriber and the External Controlled Data Distributor, and the External Subscriber has been provided a copy of the Subscriber Agreement, CDS considers the External Subscriber to be authorized to receive Exchange Data. Please note that CDS does **not** require External Controlled Data Distributors to submit copies of the executed Data Recipient customer agreements to CDS.

Option 3 - Online Click-Through Version of Subscriber Agreement

External Controlled Data Distributors are permitted to offer an online click-through version of the Subscriber Agreement to each External Subscriber, but if a Subscriber Agreement is not administered properly, the External Controlled Data Distributor must indemnify the CDS Indemnified Parties in the event of any claim.

To offer an online click-through version of the Subscriber Agreement to External Subscribers, copy the full text of the Subscriber Agreement and complete the necessary programming to ensure the External Subscriber can enter the following information:

- External Subscriber Name
- Full Name of Person Authorized to Sign the Subscriber Agreement
- Title of Person Authorized to Sign the Subscriber Agreement
- Date of execution

The following language must be displayed to the External Subscriber so that the External Subscriber must agree to it by marking the applicable checkbox:

“ACCEPTED AND AGREED: I, an authorized officer of the Subscriber to which the preceding terms and conditions refer, acknowledge that I have read the preceding terms and conditions of this Agreement, that I understand them, and that I hereby manifest Subscriber's assent to, and Subscriber's agreement to comply with, those terms and conditions by “clicking” on the following box.”

Submission of a sample copy of the Data Recipient's click-through Subscriber Agreement, and any amendments thereto to marketdata@cboe.com, is required prior to implementation.

Once these steps have been completed, CDS considers the External Subscriber to be authorized to receive Exchange Data.

Option 4 – Hard Copy Subscriber Agreement

External Controlled Data Distributors are permitted to enter into a hard copy/paper version of the Subscriber Agreement with each External Subscriber. A copy of the Subscriber Agreement is available on the website. CDS permits External Controlled Data Distributors to accept faxed and scanned copies of the agreement as legal documents.

External Controlled Data Distributors that opt for the hard copy version of the Subscriber Agreement should follow these instructions:

1. Copy the complete text of the Subscriber Agreement into a file containing your company letterhead.
2. Print copies of the Subscriber Agreement for External Subscribers and for your records.

Once the Subscriber Agreement is signed by both the External Subscriber and the External Controlled Data Distributor, and the External Subscriber has been provided an executed copy of the Subscriber Agreement, CDS considers the External Subscriber to be authorized to receive Exchange Data. Please note that CDS does **not** require External Controlled Data Distributors to submit copies of the executed Subscriber Agreement to CDS.

Notification and Enforcement

Each External Controlled Data Distributor shall (i) enforce each of its External Subscriber's compliance with the terms of the Subscriber Agreement or equivalent agreement; (ii) provide CDS written notice of any violation thereof by an External Subscriber, immediately upon becoming aware of such violation; (iii) provide CDS notice of termination of any Subscriber Agreement, immediately upon receiving or serving notice of such termination; (iv) provide CDS any assistance as CDS may reasonably request in enforcing CDS' rights under any Subscriber Agreement; (v) upon CDS' request, cease providing any Exchange Data to any External Subscriber; and (vi) provide CDS written notice promptly upon becoming aware of any acts or omissions of any External Subscriber or other person, in addition to those otherwise required to be reported herein, which External Controlled Data Distributor believes, in its reasonable discretion, might jeopardize or prejudice the rights of CDS (or an affiliate or data provider) in any Exchange Data or threaten the security or operations of any systems or other technology utilized by or on behalf of CDS (or an affiliate) or any Data Recipient to disseminate any Exchange Data.

Trial Usage

External Controlled Data Distributors are permitted to provide real-time Exchange Data to their Data Users through a trial or for demonstration purposes for a limited time. If an External Controlled Data Distributor desires to provide Exchange Data to any Data User on a trial basis, such External Controlled Data Distributor is not required to qualify Data Users as professional or non-professional in the event the External Controlled Data Distributor (i) enters into the External Controlled Data Distributor Trial Addendum (the "**ECDD Trial Addendum**") and (ii) fully complies with each of the following requirements:

- No Data User shall be permitted to use Exchange Data pursuant to the ECDD Trial Addendum for a period of longer than thirty (30) days (the "**Trial Period**"). At the end of the Trial Period, the Data User that has participated in the trial must cease all use of the Exchange Data or be qualified (as of the effective date of termination of the Trial Period) through one of the methods identified above.
- Each Data User may participate in the trial only once for each Exchange Data product offered by CDS.
- The External Controlled Data Distributor must (i) continuously maintain a list of each Data User to which Exchange Data is provided under the ECDD Trial Addendum, together with the Data User's firm name and contact information, the specific Exchange Data product to which such Data User was or will be provided access, the date such Data User commenced or will commence receiving the Exchange Data, and the last date upon which the Data User received or will receive the Exchange Data pursuant to the ECDD Trial Addendum; and (ii) provide such documentation to CDS via marketdata@cboe.com, promptly upon CDS' request.

9 Controlled Data Distributor and Data Recipient Reporting

Display and Non-Display Usage Reporting

Distributors are required to report the number of Data Users and Devices (if applicable) related to Display and Non-Display Usage based on the requirements for the specified data product as follows:

Product	Non-Display Usage Reporting Requirement	Internal Display Usage Reporting Requirement	External Display Usage Reporting Requirement
Cboe Equities Depth	Firm-level Reporting Required	Monthly Reporting Required	Monthly Reporting Required
Cboe Equities Auction	No Reporting Required	No Reporting Required	No Reporting Required
Cboe Equities Top	No Reporting Required	No Reporting Required	Monthly Reporting Required
Cboe Equities Last Sale	No Reporting Required	No Reporting Required	Monthly Reporting Required
Cboe Equities Summary Depth	No Reporting Required	No Reporting Required	Monthly Reporting Required
Cboe One Feed	No Reporting Required	No Reporting Required	Monthly Reporting Required
Cboe ETF Implied Liquidity Feed	No Reporting Required	No Reporting Required	Monthly Reporting Required
BZX or EDGX Options Depth (includes Complex)	No Reporting Required	Monthly Reporting Required	Monthly Reporting Required
EDGX Options Auction (includes Complex)	No Reporting Required	Monthly Reporting Required	Monthly Reporting Required
BZX or EDGX Options Top (includes Complex)	No Reporting Required	Monthly Reporting Required	Monthly Reporting Required
Cboe Options BBO / Depth	No Reporting Required	No Reporting Required	Monthly Reporting Required for Cboe Floor Broker Data Users and Display Only Service
Cboe COB	Monthly Device Reporting Required	Monthly Reporting Required	Monthly Reporting Required
C2 Options BBO / Depth	No Reporting Required	No Reporting Required	No Reporting Required (with exception of Display Only Service)
C2 COB	Monthly Device Reporting Required	Monthly Reporting Required	Monthly Reporting Required
CFE Top (Level 1)	Monthly Device Reporting Required	Monthly Reporting Required	Monthly Reporting Required
CFE PITCH (Level 2)	Monthly Device Reporting Required	Monthly Reporting Required	Monthly Reporting Required
Cboe Crypto Feed	No Reporting Required	Monthly Reporting Required	Monthly Reporting Required
Cboe FX US Depth	No Reporting Required	No Reporting Required	Monthly Reporting Required
Cboe FX London Depth	No Reporting Required	No Reporting Required	Monthly Reporting Required

Unless otherwise provided by CDS or indicated in this section of the Market Data Policies, Data Recipient shall use reasonable efforts to provide such reporting within 15 days of the end of the applicable reporting period. Failure to report within 60 days of the end of the applicable reporting period may result in suspension or termination of provision of Exchange Data to Data Recipient.

Display Usage Reporting

If a product shown above requires no reporting, Controlled Data Distributors do not have to report the Data Users or Devices receiving the controlled data for display or non-display use. For products that require display usage reporting, Controlled Data Distributors must count every Professional Data User and Non-Professional Data User to which they provide Exchange Data. Thus, the Controlled Data Distributor's count will cover every Data User that accesses the Exchange Data, regardless of the purpose for which the Data User uses the Exchange Data. Controlled Data Distributors must report all Professional Data Users and Non-Professional Data Users in accordance with the following:

- In connection with a Controlled Data Distributor's distribution of Exchange Data, the Controlled Data Distributor should count as one Data User each unique Data User that the Controlled Data Distributor has entitled to have access to the Exchange Data. However, where a Device is dedicated specifically to a single individual, the Controlled Data Distributor should count only the individual and need not count the Device.
- The Controlled Data Distributor should identify and report each unique Data User. If a Data User uses the same unique method to gain access to the Exchange Data, the Controlled Data Distributor should count that as one Data User. However, if a unique Data User uses multiple methods to gain access to the Exchange Data (e.g., a single Data User has multiple passwords and user identifications), the Controlled Data Distributor should report all of those methods as one Data User.
- Controlled Data Distributors should report each unique individual person who receives access through multiple Devices as one Data User so long as each Device is dedicated specifically to that individual.
- If a Controlled Data Distributor entitles one or more individuals to use the same Device, the Controlled Data Distributor should include only the individuals, and not the Device, in the count.

Controlled Data Distributors must submit usage reports of real-time Exchange Data on a monthly basis using the [Data Recipient Declarations Tool](#) by entering details directly or via upload files in CSV format. TCB Data is available as an alternative if requested. Monthly reporting for the prior month's activity is due on the 15th of the current month (i.e., August 15th is the due date for July reporting). For Display Usage reporting, previous month quantities will be carried over on a month-to-month basis to aid in the reporting of Data Users and Devices, and Controlled Data Distributors may submit revised reporting in order to correct errors in the reporting of total quantities or Data User categorization. Controlled Data Distributors may only submit revised reporting within 60 days of the date where usage activity occurred 30 calendar days after the reporting due date (i.e., June 14th for April reporting). Each report may include the following:

- Data User Firm name, contact information, and billing address
- Address at which Data User receives the Exchange Data
- Type of service
- The earliest date upon which a Data User receives the Exchange Data from the Controlled Data Distributor
- The last date upon which a Data User receives the Exchange Data from the Controlled Data Distributor (termination date)
- Total aggregated number of Display Data Users

Controlled Data Distributors that distribute Equity and Options Exchange Data to Data Users that have obtained an Enterprise license are not required to report Data User quantities monthly, but are required to provide Data User quantities for each Data User every six months.

Non-Display Usage Reporting

For products that require Non-Display Device Reporting, distributors must count every Device to which they provide Exchange Data. Thus, the Data Recipient's count will include every Device that accesses the Exchange Data, regardless of the purpose for which the Device uses the Exchange Data unless otherwise noted in the Market Data Policies. Additionally, Devices accessing bulk CFE Exchange Data must be reported as described in section 7 of the Market Data Policies.

Devices used in the transportation, dissemination or aggregation of data are not necessarily fee liable, but the Data Recipient should be able to identify such Devices that exist within the market data infrastructure and identify how many Devices are used for distribution separate and apart from the Devices that are used for other purposes.

Non-Display Usage does not include any use of Exchange Data that enables and results in the output of such Exchange Data solely in a display.

Non-Display Usage may include but is not limited to:

- Algorithmic/automated trading
- Order routing
- Surveillance
- Order management
- Risk management

For products that require firm-level reporting, Data Recipients will be required to promptly (i) provide CDS with written notice in the case that Exchange Data is or will be used for Non-Display Usage; and (ii) provide CDS with prior written notice when Exchange Data is discontinued for Non-Display Usage, as described in this section of the Market Data Policies.

Data Recipients operating a registered Automated Trading System (ATS), Electronic Communication Network (ECN) or National Securities Exchange trading platform will be required to promptly (i) provide CDS with written notice in the case that equity depth Exchange Data is or will be used within the trading platform (including any order routing system dedicated for use within the trading platform); and (ii) provide CDS with prior written notice when equity depth Exchange Data is discontinued for use within the trading platform or dedicated order router.

10 Service Facilitator

A Data Recipient may delegate any of its responsibilities, obligations or duties under or in connection with the Data Agreement to a Service Facilitator, which may discharge those responsibilities, obligations or duties on behalf of the Data Recipient in accordance with the Data Agreement; *provided, however*, that the Data Recipient shall be and will remain responsible for compliance by such Service Facilitators with all applicable terms and conditions of the Data Agreement and all other acts and omissions thereby in connection with the receipt, use and distribution of the Exchange Data. Additionally, Data Recipient may use a Service Facilitator to facilitate the dissemination of Exchange Data in Data Recipient's service, provided that Data Recipient has a legally valid and enforceable contract with such Service Facilitator, prior to distributing any Exchange Data to any Service Facilitator, that: (a) includes all limitations on the Service Facilitator's right to use and redistribute Exchange Data; and (b) protects the CDS Indemnified Parties to the same extent as if the Service Facilitator had signed a Data Agreement with CDS directly. Service Facilitators may support one or more functions for the Data Recipient including, but not limited to, website operation, software development, facilities and equipment operation, and service installation. The Data Recipient must, through a legally enforceable written agreement with each Service Facilitator:

- Ensure CDS Indemnified Parties are protected to the same extent as if the Service Facilitator were a party to the Data Agreement, including without limitation by permitting CDS to audit the Service Facilitator on the same terms as CDS is permitted to audit the Data Recipient under the Data Agreement.
- Ensure no terms of such agreement conflict with the terms of the Data Agreement.
- Ensure Exchange Data or controlled data distribution of Exchange Data to a Data Recipient may occur only after the Data Recipient is authorized by CDS, or Data Recipient is qualified through one of the Controlled Data Distributor qualification methods outlined above.
- Ensure the Data Recipient, and not the Service Facilitator, controls all entitlement of Exchange Data to the Data Recipient.

Notwithstanding the foregoing, the Service Facilitator must sign a Data Agreement and must fulfill all requirements of CDS if the Service Facilitator receives Exchange Data directly from CDS. Finally, if the Data Recipient uses any Service Facilitators, the Data Recipient must provide a list of all Service Facilitators to CDS on a [Service Facilitator List](#).

11 Enhanced Controlled Data Distribution ("ECDD") Program

Through the Enhanced Controlled Data Distribution ("ECDD") Program for **Cboe Options Exchange Data only**, Controlled Data Distributors may provide Cboe Options Exchange Data (BBO, Book Depth, and/or COB) to Data Users through an Application Programming Interface ("API") where the graphical user interface is provided by a Service Facilitator (as described in section 10) or custom developed by a Data User. The ECDD program requires that Exchange Data be provided for Display Usage only where the Controlled Data Distributor controls the entitlements to the Exchange Data, but does not control the display. Although the Controlled Data Distributor controls the entitlements and not the display when providing Exchange Data to a Data User under ECDD,

the Controlled Data Distributor will be required to comply with all requirements pertaining to the distribution of Exchange Data, Data User entitlements, and Display Usage reporting as described in the Policies.

The following specific requirements must be met in order to be approved as a Controlled Data Distributor under the ECDD program:

- Must complete the Data Agreement and Exchange Data Order Form and System Description describing, and at the discretion of Cboe, demonstrating each Enhanced Controlled Data Distribution and entitlement system utilizing the Exchange Data. If the interface is a Service Facilitator product, the Controlled Data Distributor must identify the Service Facilitator and Service Facilitator product name in a Service Facilitator List.
- Will be responsible for controlling the distribution of Exchange Data, as well as the Data User entitlements.
- Will be responsible for the reporting of Data Users accessing Exchange Data under the ECDD program, including the Data User's organization, separately from those Data Users not covered under the ECDD program.
- Will be responsible for the payment of Usage Fees for Data Users accessing Exchange Data under the ECDD program.
- Will be responsible for activity monitoring where general parameters are set for non-display actions to occur which support multiple Data Users, as this would constitute Non-Display Usage and would not meet the requirements for the ECDD program. If however activity included an individually set parameter (i.e., a parameter set by a Data User), where a non-display action occurs and the Data User is informed about the result of that action, this will be considered Display Usage under the ECDD program.
- May distribute Exchange Data to a Service Facilitator for software development and quality assurance testing purposes, provided that all Service Facilitator Data Users are reported and that the Service Facilitator is contractually restricted from redistributing Exchange Data. Additionally, must contractually control the use of any Service Facilitator software tools which allow for parameter settings to be made, if applicable.
- Must first reformat the Exchange Data prior to retransmission, but not affect the integrity of the Exchange Data and not render it inaccurate, unfair, uninformative, fictitious, misleading or discriminatory.
- Must contractually obligate the Data User to use Exchange Data for its own purposes only and not redistribute Exchange Data outside of the Data User's organization, or internally to others within the same Data User organization.
- Must contractually restrict usage by the Data User and if applicable, the Service Facilitator to Display Usage only.
- Must monitor Data Users for excessive usage to ensure compliance with the requirements (e.g., no Non-Display Usage, or non-reported multi User access over the same entitlement).
- Must assume liability for any unauthorized use of Exchange Data by the Data User and if applicable, the Service Facilitator. The Controlled Data Distributor must retain all Data User records for audit purposes.

Data Users that wish to obtain Cboe Options Exchange Data through the ECDD program must complete a Cboe Subscriber Agreement **or equivalent** administered by the Controlled Data Distributor as described in section 8 of the Policies.

12 CFE Independent Software Vendor

No Person other than a Member may receive Exchange Data from an Independent Software Vendor (except that it is permissible for an Independent Software Vendor to provide Exchange Data to another Independent Software Vendor solely for purposes of enabling one or more Members to receive Exchange Data). Any Member that receives Exchange Data through an Independent Software Vendor must do so through separate connectivity that is not utilized by any other Member. For more detailed requirements regarding usage of Independent Software Vendors, please refer to CFE Rules.

13 Delayed Data

Once a period of time has passed since the dissemination of Exchange Data by CDS, Real-time Exchange Data will become Delayed Exchange Data. There are different requirements for the distribution of Delayed Exchange Data as compared to Real-time Exchange Data. The following definitions apply:

- **Delay Period** – The period of time that has passed since the dissemination of Exchange Data by CDS, which is currently 15 minutes.
- **Real-time Exchange Data** – Exchange Data distributed prior to the expiration of the Delay Period.
- **Delayed Exchange Data** – Exchange Data distributed after the Delay Period.

- **End-of-Day Exchange Data** – Exchange Data distributed after the market has closed for the current trading day and after the Delay Period.

Controlled Data Distributors of Delayed Exchange Data are not required to qualify Data Users in respect of receipt of Delayed Exchange Data identified in the Controlled Data Distributor Requirements section of these Market Data Policies. Thus, Controlled Data Distributors of Delayed Data are not required to administer a Subscriber Agreement or equivalent with such Data Users. In addition, Uncontrolled Data Distributors of Delayed Exchange Data are not required to obtain a Data Agreement from Data Users receiving Delayed Exchange Data or report Data Users receiving Delayed Data, with the exception of Uncontrolled Data Distributors of CFE Exchange Data who are required to obtain a Data Agreement from Data Feed Subscribers receiving Delayed or End-of-Day Exchange Data for external distribution. Each Delayed Exchange Data distributor must obtain approval and describe, using the Exchange Data Order Form and System Description, its plan to distribute Delayed Exchange Data externally to any Data User that is not an affiliate of the Data Recipient. Data Feed Subscribers of Delayed Exchange Data are not permitted to redistribute the Delayed Exchange Data as an Uncontrolled Data Distributor. The waiver of the qualification and agreement requirement by CDS does not limit the Controlled Data Distributor's or Uncontrolled Data Distributor's obligations as described within the Data Agreement executed with CDS.

For Controlled Data Distributors providing Delayed Exchange Data, CDS requires that an appropriate delay message be provided to Subscribers for all displays of Exchange Data. The delay message must prominently appear on all displays containing Delayed Exchange Data, such as at or near the top of the page. In the case of a ticker, the delay message should be interspersed with the market data at least every 90 seconds. Examples of appropriate delay messages are as follows: "Data Delayed 15 minutes", "Data Delayed 24 hours", "Delayed Data", "Del-15", and "Data Delayed until Midnight CET".

14 Derived Data

"**Derived Data**" is pricing data or other data that (i) is created in whole or in part from Exchange Data, (ii) is not an index or financial product as described below and (iii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data. Generally, Derived Data usage is not considered fee liable. However, Derived Data that contains price data and/or is based upon a single security, futures contract, currency pair, or index is generally fee liable at the underlying product rates. There may be certain exceptions to fee liability depending on the data feed used to create the Derived Data and the Derived Data being created. Please review the product Fee Schedule, which will describe any applicable exceptions, or contact marketdata@cboe.com for more information.

Data Recipients distributing Derived Data must use the Exchange Data Order Form and System Description to describe any Derived Data created using Exchange Data. Distributors of Derived Data are not required to report Data Users receiving Derived Data. Distribution of Derived Data does not require the Data User receiving Derived Data to sign a Data Agreement with CDS. If a distributor opts not to administer a Subscriber Agreement, or equivalent then the distributor is required to indemnify CDS in the event of a claim.

Notwithstanding the definition and rights with respect to Derived Data described above, Data Recipient shall not use, or permit any third party to use, any Exchange Data (i) as input data in the creation or calculation of any index or similar work or (ii) to create any financial instrument or investment product that is based on, or seeks to match the performance of, values included in the Exchange Data, in each case unless and until Data Recipient has entered into a separate license agreement with CDS or the applicable Exchange authorizing such use of the Exchange Data or, with respect to any Exchange Data owned by a third party, the applicable provider of such Exchange Data.

15 Fees

Fees for Exchange Data are displayed on the Website at:

<http://markets.cboe.com/us/equities/membership/pricing/>
<http://markets.cboe.com/us/options/membership/pricing/>
<http://www.cboe.com/trading-resources/fee-schedules>
<https://www.cboe.com/publish/cfeeeschedule/cfeeeschedule.pdf>
For Cboe FX fees, please contact hotspotsales@bats.com

If a Data Recipient is receiving identical Exchange Data from (i) multiple Uncontrolled Data Distributors or (ii) from one or more Uncontrolled Data Distributors and CDS, the Data Recipient will only be required to pay the distribution fee once to CDS – either the Internal Distribution Fee or the External Distribution Fee – depending on whether the Data Recipient is distributing the Exchange Data internally or externally. Notwithstanding the foregoing, if a Data Recipient is distributing the Cboe One Feed internally and externally, the Data Recipient will be required to pay both the Internal Distribution Fee and the External Distribution Fee.

Display and Non-Display Usage Fees

For Controlled Data Distributors, Display Usage fees, including Enterprise or Digital Media fees (if applicable), by Data Users will be collected by the Controlled Data Distributor and then remitted to CDS. For Controlled Data Distributors of equity depth Exchange Data, Display Usage fees will apply for all Data Users except those Data Users using equity depth Exchange Data solely for the purpose of software development, quality assurance testing, sales support relating to redistribution, or for technical monitoring of systems using equity depth Exchange Data and not in support of other commercial/business functions. Non-Display Usage fees will apply for Data Recipients that use equity depth Exchange Data within a registered ATS, ECN or National Securities Exchange. Additionally, Non-Display Usage fees will apply for all Data Recipients that use equity depth Exchange Data for Non-Display purposes. Certain Data Recipients that make use of a Cboe approved Managed Non-Display Service Provider will be exempt from new Equity Depth Non-Display Usage Fees. In order to qualify for the exemption, the Data Recipient must meet the following requirements:

- Any Data Recipient applications that utilize the Exchange Data must be hosted within the Managed Non-Display Service Provider's cage.
- The Data Recipient's access to Exchange Data is fully managed and controlled by the Managed Non-Display Service Provider, where no further redistribution of the Exchange Data internally or externally is permitted.
- The Data Recipient is supported solely by one Managed Non-Display Service Provider, is not hosted by multiple Managed Non-Display Service Providers, and does not have their own data center-hosted environment that also receives Exchange Data.

For CFE, Devices and/or Data Users accessing CFE Exchange Data for the purposes of quality assurance testing, technical monitoring of systems, or in support of redistribution (e.g. transportation, dissemination or aggregation) are not fee liable.

Historical Exchange Data

Historical Data is Exchange Data distributed after the current trading day on a T+1 basis. Data Recipients receiving Real-time or Delayed Data may store the data and subsequently use the Historical Data internally within their own organization, including affiliates. Data Recipients may redistribute Historical Data for all products identified in Section 9, except the ETF Implied Liquidity Exchange Data and the Cboe Crypto Feed. Before a firm can redistribute Historical Data to non-Affiliates, the firm must first sign a Data Agreement and describe the system and obtain approval before distributing Historical Data. If a Data Recipient terminates their Data Agreement, they may no longer redistribute Historical Data unless the Historical Data is CDS approved Derived Data.

16 Audit

CDS has the right to conduct comprehensive audits of Data Recipients during normal business hours, upon reasonable advance notice, to verify the accuracy of reports in accordance with Regulatory Requirements and to ensure that the type and amount of fees calculated or stated to be payable to CDS are complete and accurate. Additionally, the purpose of the audits is to ensure that Data Recipients that distribute Exchange Data are complying with the terms of their agreements with CDS and verify that they are in compliance with Regulatory Requirements. While on Data Recipient's premises, CDS or its appointed designee shall comply with Data Recipient's written reasonable confidentiality and security policies and procedures to the extent made known by Data Recipient to CDS or its appointed designee. In no event will CDS or its appointed agent audit Data Recipient more than once in any 12 month period, unless necessary due to a reasonable suspicion of non-compliance with any material provision of the Data Agreement. Data Recipient shall comply promptly with any reasonable request from CDS for information regarding Data Recipient's receipt, storage, processing, commingling, display and redistribution of Exchange Data. The costs of such audit shall be borne by CDS unless such audit reveals an underpayment by Data Recipient of 10% or more or a material breach of the rights or licenses granted to Data Recipient under the Data Agreement; in such case, Data Recipient shall reimburse CDS for its costs and expenses in

conducting such audit, to the extent that such costs and expenses are commensurate with industry standards. Audits may cover a Data Recipient's market data infrastructure for 3 years preceding the date of the audit, including looking at records after the Data Agreement has been terminated. The Data Recipient's liability shall be limited to unpaid fees, together with interest, for underreporting, underpayment or other financial noncompliance that has occurred during the audit period, plus any costs and expenses as set forth above, provided such underreporting, underpaying or other financial non-compliance is a result of a good faith error by Data Recipient.

Exhibit M

SEC
Mail Processing
Section

APR 17 2018

Washington DC
415

Exhibit Request:

Provide an alphabetical list of all members, participants, subscribers or other users, including the following information:

1. Name,
2. Date of election to membership or acceptance as a participant, subscriber or other user,
3. Principal business address and telephone number,
4. If member, participant, subscriber or other user is an individual, the name of the entity with which such individual is associated and the relationship of such individual to the entity (e.g., partner, officer, director, employee, etc.),
5. Describe the type of activities primarily engaged in by the member, participant, subscriber, or other user (e.g., floor broker, specialist, odd lot dealer, other market maker, proprietary trader, non-broker dealer, inactive or other functions). A person shall be "primarily engaged" in an activity or function for purposes of this item when that activity or function is the one in which that person is engaged for the majority of their time. When more than one type of person at an entity engages in any of the six types of activities or functions enumerated in this item, identify each type (e.g., proprietary trader, Registered Competitive Trader and Registered Competitive Market Maker) and state the number of members, participants, subscribers, or other users in each, and
6. The class of membership, participation or subscription or other access.

Response:

Attached please find a list of the current Members and Sponsored Participants accepted as Users of the Exchange.

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
ABN AMRO Clearing Chicago LLC	10/15/2008	10/1/2010	5/25/2010	5/27/2010	5/13/1985	9/24/2010	Member TPH	175 W Jackson Boulevard Suite 400 Chicago, IL 60604	312-604-8000	Clearing, Transact Business with the Public, Brokerage
ACS Execution Services, LLC	1/15/2016	1/15/2016	1/15/2016	1/15/2016	NA	NA	Member TPH	12 Broad Street 2nd Floor Red Bank, NJ 07701	732-204-8999	Proprietary Trading
Agency Desk, LLC	7/1/2009	NA	NA	NA	NA	NA	Member TPH	590 Madison Avenue 21st Floor New York, NY 10022	212-935-9835	Market Maker
Akuna Securities LLC	9/15/2015	NA	NA	8/14/2017	2/2/2012	2/12/2015	Member TPH	333 S Wabash Avenue Suite 2600 Chicago, IL 60604	312-994-4640	Market Maker, Proprietary Trading
Albert Fried & Company, LLC	8/18/2008	4/15/2011	5/18/2010	5/18/2010	NA	NA	Member TPH	31 W 52nd Street New York, NY 10019	212-827-7000	Agency
Alpha Trading, LP	10/24/2017	10/24/2017	10/24/2017	10/24/2017	NA	NA	Member TPH	640 W California Avenue Sunnyvale, CA 94086	408-990-1940	Market Maker, Proprietary Trading
Alpine Securities Corporation	11/3/2008	11/15/2010	NA	NA	NA	NA	Member TPH	39 Exchange Place Salt Lake City, UT 84111	801-355-5588	Agency
AMS Derivatives B.V.	NA	NA	NA	NA	12/1/2017	NA	Member TPH	Strawinskylaan 3095 Amsterdam, 1077ZX Netherlands	31-020-708-7000	Proprietary Trading
Andrie Trading LLC	NA	NA	NA	NA	10/1/1999	NA	Member TPH	440 S LaSalle Street Suite 1110 Chicago, IL 60605	312-663-8195	Market Maker
Apex Clearing Corporation	6/5/2012	6/5/2012	6/5/2012	6/5/2012	6/6/2012	6/6/2012	Member TPH	One Dallas Center 350 N St. Paul, Suite 1300 Dallas, TX 75201	214-765-1055	Clearing, Transact Business with the Public
Archipelago Securities LLC	8/18/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	353 N Clark Street Suite 3200 Chicago, IL 60654	312-836-6700	Limited Routing Facility of ICE affiliated Exchanges
Athena Capital Research, LLC	7/1/2009	10/20/2010	NA	NA	NA	NA	Sponsored Participant	440 9th Avenue 11th Floor New York, NY 10001	212-931-9056	Proprietary Trading
ATM Execution LLC	3/15/2012	3/15/2012	3/21/2012	3/21/2012	NA	NA	Member TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Public Customer Business
Barclays Capital Inc.	8/18/2008	10/1/2010	5/14/2010	5/14/2010	9/22/2008	10/6/2010	Member TPH	745 7th Avenue New York, NY 10019	212-526-7000	Clearing, Market Maker, Transact Business with the Public, Brokerage, Proprietary Trading
Bay Crest Partners, LLC	10/15/2008	NA	5/25/2010	5/27/2010	NA	NA	Member TPH	40 Wall Street 42nd Floor New York, NY 10005	212-480-1400	Agency
Bayes Capital LLC	1/15/2015	1/30/2015	1/30/2015	1/30/2015	NA	NA	Member TPH	54 Jefferson Avenue Suite 2 Westwood, NJ 07675	201-660-7187	Agency
Belvedere Trading LLC	11/1/2011	3/1/2012	11/29/2011	NA	1/3/2005	4/4/2011	Member TPH	10 S Riverside Plaza Suite 2100 Chicago, IL 60606	312-893-3750	Market Maker, Proprietary Trading
Bengal Capital Trading LLC	NA	NA	NA	NA	1/15/2013	NA	Member TPH	440 S LaSalle Street Suite 2121 Chicago, IL 60605	312-362-4928	Proprietary Trading
Benjamin & Jerold Brokerage I LLC	10/1/2009	12/11/2017	12/11/2017	12/11/2017	NA	NA	Member TPH	80 Broad Street 6th Floor New York, NY 10005	646-558-0055	Agency
BGC Financial, LP	8/17/2009	NA	NA	NA	NA	NA	Member TPH	One Seaport Plaza 19th Floor New York, NY 10038	646-346-7000	Agency
Blaylock Van, LLC	5/3/2010	NA	NA	NA	NA	NA	Member TPH	600 Lexington Avenue 3rd Floor New York, NY 10022	212-715-6600	Public Customer Business
Bloomberg Tradebook LLC	10/23/2008	10/4/2010	5/14/2010	5/14/2010	NA	NA	Member TPH	919 3rd Avenue New York, NY 10022	646-324-3178	Agency
Bluefin Trading, LLC	8/3/2009	6/1/2015	9/27/2013	8/13/2013	4/27/2009	NA	Member TPH	3 Park Avenue 37th Floor New York, NY 10016	212-457-9150	Market Maker, Proprietary Trading
BMO Capital Markets Corp.	8/18/2008	11/15/2010	7/15/2014	7/15/2014	10/8/2013	11/15/2013	Member TPH	3 Times Square New York, NY 10036	212-885-4000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
BMT Trading, LLC	2/1/2010	NA	NA	NA	NA	NA	Sponsored Participant	800 3rd Avenue New York, NY 10022	212-913-0870	Proprietary Trading
BNP Paribas Prime Brokerage, Inc.	12/3/2012	12/3/2012	NA	NA	NA	NA	Member TPH	787 7th Avenue New York, NY 10019	212-471-6768	Clearing
BNP Paribas Securities Corp.	8/18/2008	9/15/2010	5/25/2010	5/27/2010	1/5/2005	10/15/2010	Member TPH	787 7th Avenue New York, NY 10019	212-841-2000	Clearing, Order Flow Provider, Proprietary Trading, Transact Business with the Public
BNY Mellon Capital Markets, LLC	NA	NA	NA	1/17/2017	NA	NA	Member TPH	101 Barclay Street New York, NY 10286	212-815-4972	Market Maker
Boerboel Capital LLC	11/17/2017	NA	NA	NA	2/1/2017	NA	Member TPH	300 N LaSalle Street Suite 2060 Chicago, IL 60654	708-967-6843	Market Maker
BTIG, LLC	8/18/2008	11/15/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	600 Montgomery Street 6th Floor San Francisco, CA 94111	415-248-2200	Market Maker
C&C Trading LLC	8/18/2008	10/11/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	71 Arch Street 1st Floor Greenwich, CT 06830	212-706-1227	Proprietary Trading
Canaccord Genuity Inc.	10/1/2013	10/1/2013	6/10/2010	6/10/2010	NA	NA	Member TPH	535 Madison Avenue New York, NY 10022	212-389-8000	Market Maker
Canadian Imperial Holdings, Inc.	10/15/2008	11/15/2010	NA	NA	NA	NA	Sponsored Participant	300 Madison Avenue 5th Floor New York, NY 10017	212-856-3877	Proprietary Trading
Cantor Fitzgerald & Co.	10/23/2008	2/13/2015	5/25/2010	5/27/2010	NA	NA	Member TPH	110 E 59th Street 4th Floor New York, NY 10022	212-938-5000	Agency, Institutional Trading
Capital Institutional Services, Inc.	8/18/2008	NA	5/25/2010	5/27/2010	NA	NA	Member TPH	1700 Pacific Avenue Suite 1100 Dallas, TX 75201	214-720-0055	Agency
Cardinal Capital Management, LLC	NA	NA	NA	NA	10/1/2007	NA	Member TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	Market Maker
Cboe Trading, Inc.	10/23/2008	9/1/2010	5/14/2010	5/14/2010	NA	NA	Member TPH	8050 Marshall Drive Suite 120 Lenexa, KS 66214	913-815-7000	Limited Routing Facility of Cboe affiliated Exchanges
CF Global Trading, LLC	10/23/2008	1/3/2011	NA	NA	NA	NA	Member TPH	60 E 42nd Street Suite 1455 New York, NY 10165	212-888-4711	Market Maker
Charles Schwab & Co., Inc.	NA	NA	NA	4/3/2017	6/2/1980	NA	Member TPH	211 Main Street San Francisco, CA 94105	415-636-7000	Clearing, Transact Business with the Public
Chimera Securities, LLC	6/2/2014	6/2/2014	6/25/2014	6/25/2014	NA	NA	Member TPH	27 Union Square W 4th Floor New York, NY 10003	646-597-6100	Proprietary Trading

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
Chimera Securities, LLC	11/17/2017	11/27/2017	11/27/2017	11/17/2017	NA	NA	Sponsored Participant	27 Union Square W 4th Floor New York, NY 10003	646-597-6100	Proprietary Trading
CIBC World Markets Corp.	8/18/2008	11/15/2010	NA	NA	2/14/1973	NA	Member TPH	425 Lexington Avenue New York, NY 10017	212-856-4000	Clearing, Transact Business with the Public
Citadel Securities LLC	10/23/2008	10/1/2010	5/14/2010	5/14/2010	4/17/2002	10/7/2010	Member TPH	131 S Dearborn Street 32nd Floor Chicago, IL 60603	312-395-2100	Market Maker, Order Flow Provider, Brokerage
Citi Order Routing and Execution, LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	10/1/2008	9/24/2010	Member TPH	11 Ewall Street Mount Pleasant, SC 29464	843-789-2080	Clearing, Transact Business with the Public
Citigroup Derivatives Markets Inc.	2/15/2018	NA	NA	2/15/2018	12/3/2004	2/25/2011	Member TPH	130 Cheshire Lane Suite 102 Minnetonka, MN 55305	212-723-2960	Market Maker
Citigroup Global Markets Inc.	9/24/2008	12/15/2010	5/25/2010	5/27/2010	5/2/2011	NA	Member TPH	390-388 Greenwich Street New York, NY 10013	212-816-6000	Clearing, Proprietary Trading, Transact Business with the Public
Clarksons Platou Securities, Inc.	NA	NA	1/15/2015	NA	NA	NA	Member TPH	280 Park Avenue 21st Floor New York, NY 10017	212-317-7080	Public Customer Business
Clearpool Execution Services, LLC	5/15/2014	5/15/2014	6/16/2014	6/16/2014	NA	NA	Member TPH	17 State Street 38th Floor New York, NY 10004	212-531-8500	Public Customer Business
CLSA Americas, LLC	NA	NA	5/21/2013	5/21/2013	NA	NA	Member TPH	1301 Avenue of the Americas 15th Floor New York, NY 10019	212-549-5097	Agency
CM-CIC Market Solutions, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member TPH	520 Madison Avenue New York, NY 10022	212-659-6292	Agency
CMT Fund XXV Limited	7/2/2012	7/2/2012	NA	NA	NA	NA	Sponsored Participant	500 W Monroe Street Suite 2630 Chicago, IL 60661	312-320-7897	Agency
CMT Trading LLC	3/17/2014	3/17/2014	3/5/2014	3/5/2014	NA	NA	Member TPH	500 W Monroe Street Suite 2630 Chicago, IL 60661	312-930-9050	Market Maker, Proprietary Trading
CMZ Trading, LLC	NA	NA	NA	NA	10/1/2004	NA	Member TPH	141 W Jackson Boulevard Suite 626 Chicago, IL 60604	312-604-3310	Market Maker, Proprietary Trading
CODA Markets, Inc.	10/15/2008	10/4/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	2624 Patriot Boulevard Glenview, IL 60026	224-521-2700	ATS
Cognitive Capital, LLC	NA	NA	NA	NA	5/13/2004	NA	Member TPH	141 W Jackson Boulevard Suite 1620 Chicago, IL 60604	312-431-0400	Proprietary Trading
Comhar Capital Markets, LLC	2/27/2017	NA	NA	NA	NA	NA	Member TPH	311 S Wacker Drive Suite 2280A Chicago, IL 60606	872-205-0190	Proprietary Trading
Consolidated Trading, LLC	NA	NA	NA	NA	1/2/2002	NA	Member TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	Market Maker
COR Clearing LLC	10/15/2009	NA	NA	NA	NA	NA	Member TPH	1200 Landmark Center 1299 Farnam Street Suite 800 Omaha, NE 68102	402-384-6100	Clearing Services
Cowen and Company, LLC	8/18/2008	10/7/2010	5/14/2010	5/14/2010	NA	NA	Member TPH	599 Lexington Avenue 20th Floor New York, NY 10022	646-562-1010	Market Maker
Cowen Execution Services LLC	10/15/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	1633 Broadway 48th Floor New York, NY 10019	800-367-8998	Full Service
Cowen Prime Services LLC	3/15/2011	3/15/2011	NA	NA	NA	NA	Member TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Public Customer Business, Proprietary Trading
Credit Suisse Securities (USA) LLC	9/3/2008	10/1/2010	5/25/2010	5/27/2010	8/14/1981	10/8/2010	Member TPH	11 Madison Avenue New York, NY 10010	212-325-2000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
Critical Trading, LLC	7/1/2014	NA	NA	NA	NA	NA	Member TPH	120 W 45th Street 15th Floor New York, NY 10036	646-918-0529	Market Maker, Proprietary Trading
CSS, LLC	NA	NA	NA	NA	8/21/1998	NA	Member TPH	175 W Jackson Boulevard Suite 440 Chicago, IL 60604	312-542-8505	Proprietary Trading
CTC, LLC	3/15/2018	NA	NA	NA	3/25/1998	3/3/2011	Member TPH	440 S LaSalle Street 4th Floor Chicago, IL 60605	312-863-8000	Market Maker
Cutler Group, LP	4/1/2010	10/6/2010	NA	10/16/2015	4/5/1999	NA	Member TPH	101 Montgomery Street Suite 700 San Francisco, CA 94104	415-293-3956	Market Maker, Proprietary Trading
Dash Financial Technologies LLC	10/23/2008	7/2/2012	6/9/2010	6/9/2010	5/19/2000	9/30/2010	Member TPH	311 S Wacker Drive Suite 1000 Chicago, IL 60606	312-986-2006	Clearing, Floor Broker, Order Flow Provider, Transact Business with the Public, Brokerage
Deutsche Bank Securities Inc.	10/15/2008	10/1/2010	5/21/2010	5/21/2010	4/25/1996	8/15/2011	Member TPH	60 Wall Street New York, NY 10005	212-250-2500	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
DRW Securities, LLC	9/1/2009	11/1/2010	5/25/2010	5/27/2010	11/23/1998	1/22/2016	Member TPH	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1000	Market Maker, Proprietary Trading
E*TRADE Securities LLC	NA	NA	NA	6/10/2010	NA	NA	Member TPH	11 Times Square 32nd Floor New York, NY 10036	646-521-4300	Public Customer Business
EG Market Technologies LLC	4/3/2017	4/3/2017	4/3/2017	4/3/2017	NA	NA	Member TPH	767 5th Avenue 45th Floor New York, NY 10153	646-757-2831	Market Maker, Proprietary Trading
Electronic Transaction Clearing, Inc.	10/23/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	860 S Figueroa Street Los Angeles, CA 90017	949-533-1885	Market Maker
Essex Radez LLC	2/17/2009	10/1/2010	5/10/2010	5/14/2010	NA	NA	Member TPH	440 S LaSalle Street Suite 1111 Chicago, IL 60605	312-212-1815	Market Maker
Evercore Group LLC	NA	NA	5/10/2017	NA	NA	NA	Member TPH	55 E 52nd Street New York, NY 10055	212-857-3100	Public Customer Business
FIS Brokerage & Securities Services LLC	8/18/2008	10/1/2010	5/6/2010	5/6/2010	NA	NA	Member TPH	2100 Enterprise Avenue Geneva, IL 60134	630-482-7100	Agency
Flow Traders U.S. Institutional Trading LLC	NA	NA	6/1/2016	NA	NA	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Riskless Principal
Flow Traders U.S. LLC	10/1/2009	8/1/2012	2/28/2014	2/28/2014	9/31/2010	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Proprietary Trading
G1 Execution Services, LLC	8/18/2008	12/1/2010	4/17/2010	4/17/2010	NA	NA	Member TPH	175 W Jackson Boulevard Suite 1700 Chicago, IL 60604	312-362-0404	Market Maker
G2 Trading LLC	6/1/2016	NA	NA	NA	NA	NA	Member TPH	325 S Sangamon Street Chicago, IL 60607	404-697-9915	Market Maker, Proprietary Trading
Gelber Securities, LLC	5/1/2015	NA	NA	NA	NA	NA	Member TPH	350 N Orleans Street 7th Floor Chicago, IL 60654	312-408-4354	Market Maker, Proprietary Trading

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
Geneva Stock, LLC	NA	NA	NA	NA	4/6/2001	NA	Member TPH	440 S LaSalle Street Suite 1711 Chicago, IL 60605	312-362-4404	Market Maker
Glenn Smith Trading LLC	NA	NA	NA	NA	9/9/2010	NA	Member TPH	995 Ridgewood Drive Chicago, IL 60185	630-346-8739	Market Maker
Global Execution Brokers, LP	2/1/2010	10/5/2010	12/1/2015	10/15/2015	12/23/2003	9/24/2010	Member TPH	401 City Avenue Bala Cynwyd, PA 19004	610-617-2600	Floor Broker, Transact Business with the Public, Brokerage
Global HFT Management, LLC	10/1/2010	NA	NA	NA	NA	NA	Sponsored Participant	800 3rd Avenue New York, NY 10022	212-813-0870	Proprietary Trading
Global Liquidity Partners, LLC	4/21/2011	5/15/2012	NA	NA	NA	NA	Sponsored Participant	12 Broad Street Suite 201 Redbank, NJ 07701	773-459-4665	Agency
Goldman Sachs & Co. LLC	10/23/2008	10/12/2010	5/14/2010	5/14/2010	2/21/1973	10/8/2010	Member TPH	200 West Street New York, NY 10282	212-902-1000	Clearing, Market Maker, Proprietary Trading, Transact Business with the Public, Brokerage
Gordon, Haskett Capital Corporation	NA	NA	NA	5/2/2016	NA	NA	Member TPH	441 Lexington Avenue 10th Floor New York, NY 10017	212-883-0600	Agency, Institutional Trading
Green Street Trading, LLC	11/1/2011	NA	NA	NA	NA	NA	Member TPH	650 Newport Center Drive Suite 800 Newport Beach, CA 92660	214-749-4730	Agency
Group One Trading, LP	6/2/2015	NA	NA	9/29/2015	11/23/1994	NA	Member TPH	440 S LaSalle Street Suite 3232 Chicago, IL 60605	312-347-8864	Market Maker
GTS Securities LLC	12/17/2013	5/1/2012	6/2/2014	6/2/2014	NA	NA	Member TPH	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Market Maker, Proprietary Trading
Hainey Investments Limited	6/16/2014	NA	NA	NA	NA	NA	Sponsored Participant	Themistoki Deri 41 #806-807 Nicosia, Cyprus	704-248-8221	Proprietary Trading
HAP Trading, LLC	10/1/2009	11/15/2010	NA	6/2/2010	3/16/2001	NA	Member TPH	395 Hudson Street Suite 701 New York, NY 10014	212-380-5100	Market Maker, Proprietary Trading
Hardcastle Trading USA LLC	4/15/2009	NA	5/25/2010	5/27/2010	5/16/2005	NA	Member TPH	755 Secaucus Road Suite F-1110 Secaucus, NJ 07094	201-305-8888	Proprietary Trading
Henning-Carey Proprietary Trading, LLC	8/15/2012	NA	NA	NA	NA	NA	Sponsored Participant	141 W Jackson Boulevard Suite 1801 Chicago, IL 60604	312-789-8764	Proprietary Trading
Highbridge Capital Management, LLC	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	9 West 57th Street 27th Floor New York, NY 10019	212-287-4900	Proprietary Trading
Hilltop Securities Inc.	10/23/2008	9/1/2010	NA	5/21/2013	10/1/2010	NA	Member TPH	1201 Elm Street Suite 3500 Dallas, TX 75270	214-859-1800	Clearing, Transact Business with the Public
HRT Financial LLC	2/1/2010	10/1/2010	5/18/2010	5/18/2010	1/24/2011	1/24/2011	Member TPH	4 World Trade Center 150 Greenwich Street, 57th Floor New York, NY 10007	212-293-1444	Proprietary Trading
HSBC Securities (USA) Inc.	4/3/2017	4/3/2017	4/3/2017	4/3/2017	11/21/2005	NA	Member TPH	452 Fifth Avenue New York, NY 10018	224-880-7116	Clearing, Transact Business with the Public
HTG Capital Partners, LLC	10/3/2016	10/3/2016	10/3/2016	10/3/2016	NA	NA	Sponsored Participant	601 S LaSalle Street 2nd Floor Chicago, IL 60605	312-327-4112	Proprietary Trading
Hybrid Trading & Resources, LLC	NA	NA	NA	NA	3/22/2005	NA	Member TPH	111 W Jackson Boulevard Suite 1146 Chicago, IL 60604	312-427-1585	Floor Broker, Transact Business with the Public
ICAP Corporates LLC	NA	NA	3/28/2013	NA	NA	NA	Member TPH	Harborside 5 Hudson Street, Suite 1200 Jersey City, NJ 07311	212-341-9944	Agency
IEX Services LLC	10/1/2013	10/1/2013	9/24/2013	9/24/2013	NA	NA	Member TPH	4 World Trade Center 44th Floor New York, NY 10007	646-343-2000	Limited Routing Facility of IEX affiliated Exchanges
IMC Financial Markets	8/18/2008	10/1/2010	5/25/2010	5/27/2010	7/5/2000	9/24/2010	Member TPH	233 S Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3300	Market Maker, Proprietary Trading
Industrial and Commercial Bank of China Financial Services LLC	5/15/2014	5/15/2014	NA	NA	NA	NA	Member TPH	1633 Broadway 28th Floor New York, NY 10019	212-993-7300	Clearing Services
Instinet LLC	8/18/2008	9/1/2010	5/14/2010	5/14/2010	12/29/2009	10/6/2010	Member TPH	Worldwide Plaza 309 W 49th Street New York, NY 10019	212-310-9500	Clearing, Transact Business with the Public, Brokerage
Interactive Brokers Corp.	NA	NA	NA	NA	4/21/2009	10/6/2010	Member TPH	8 Greenwich Office Park Greenwich, CT 06831	203-618-5700	Floor Broker, Brokerage
Interactive Brokers LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	One Pickwick Plaza 2nd Floor Greenwich, CT 06830	203-618-5710	Full Service
International Correspondent Trading, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member TPH	One University Plaza Suite 301 Hackensack, NJ 07601	201-222-9300	Agency
Israel A. Englander & Co., LLC	NA	NA	NA	NA	10/27/1995	2/14/2011	Member TPH	666 5th Avenue 14th Floor New York, NY 10103	212-841-4567	Floor Broker, Transact Business with the Public, Brokerage
ISTRA, LLC	12/15/2011	12/15/2011	NA	NA	NA	NA	Sponsored Participant	230 Park Avenue 10th Floor New York, NY 10169	718-618-4929	Proprietary Trading
ITG Inc.	8/18/2008	10/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	One Liberty Plaza 165 Broadway, 4th Floor New York, NY 10006	212-588-4000	Agency
J.P. Morgan Securities LLC	8/18/2008	9/15/2010	5/14/2010	5/14/2010	10/29/1985	11/18/2010	Member TPH	383 Madison Avenue New York, NY 10179	212-272-2000	Clearing, Transact Business with the Public
Jane Street Capital, LLC	5/1/2009	11/15/2010	5/14/2010	5/14/2010	9/4/2012	NA	Member TPH	250 Vesey Street 5th Floor New York, NY 10281	646-759-6000	Market Maker, Proprietary Trading
Jane Street Options, LLC	1/3/2012	NA	NA	NA	NA	NA	Sponsored Participant	One New York Plaza New York, NY 10004	212-651-6969	Proprietary Trading
Jane Street Options, LLC	4/15/2016	NA	NA	NA	5/2/2005	NA	Member TPH	250 Vesey Street 5th Floor New York, NY 10281	646-759-6000	Market Maker
Jefferies Investment Advisers	7/1/2011	7/15/2011	NA	NA	NA	NA	Sponsored Participant	520 Madison Avenue New York, NY 10022	212-323-3993	Full Service
Jefferies LLC	10/23/2008	10/19/2010	5/25/2010	5/27/2010	7/9/2012	7/18/2012	Member TPH	520 Madison Avenue New York, NY 10022	212-284-2300	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
JNK Securities Corp.	11/17/2008	11/15/2010	NA	NA	NA	NA	Member TPH	140 E 45th Street 27th Floor New York, NY 10017	212-885-6300	Agency
Juliet Group, LLC	3/1/2011	3/1/2011	NA	NA	NA	NA	Sponsored Participant	240 E 35th Street #3A New York, NY 10016	646-360-0595	Proprietary Trading
Juliet Labs, LLC	9/20/2017	9/20/2017	9/20/2017	9/20/2017	NA	NA	Sponsored Participant	1 Northside Piers Suite 14H Brooklyn, NY 11249	646-360-0595	Proprietary Trading

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Jump Trading, LLC	8/18/2008	10/1/2010	5/14/2010	5/14/2010	4/2/2012	6/6/2017	Member TPH	600 W Chicago Avenue Suite 825 Chicago, IL 60654	312-205-8900	Market Maker, Proprietary Trading
Keefe, Bruyette & Woods, Inc.	8/18/2008	12/1/2010	6/8/2010	6/8/2010	NA	NA	Member TPH	787 7th Avenue New York, NY 10019	212-887-7777	Agency
Lakeshore Securities, LP	NA	NA	NA	NA	1/24/1983	NA	Member TPH	401 S LaSalle Street Suite 1000 Chicago, IL 60605	312-663-1307	Clearing, Floor Broker, Market Maker, Transact Business with the Public
Lamberson Capital LLC	NA	NA	NA	NA	3/23/2016	NA	Member TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	Market Maker
Lampert Capital Markets Inc.	NA	2/18/2014	2/26/2014	NA	NA	NA	Member TPH	444 Madison Avenue Suite 401 New York, NY 10022	646-833-4900	Introducing Broker
Lampost Capital, LC	NA	NA	NA	3/15/2016	NA	NA	Member TPH	1900 Glades Road Suite 205 Boca Raton, FL 33431	561-883-0454	Public Customer Business, Proprietary Trading
Latour Trading LLC	8/17/2009	10/1/2010	5/26/2010	5/27/2010	4/8/2011	NA	Member TPH	377 Broadway 10th Floor New York, NY 10013	917-388-8000	Proprietary Trading
Leerink Partners LLC	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	1 Federal Street 37th Floor Boston, MA 02110	617-918-4900	Agency
LEK Securities Corporation	8/18/2008	10/1/2010	5/26/2010	5/27/2010	1/9/2001	9/24/2010	Member TPH	1 Liberty Plaza 165 Broadway, 52nd Floor New York, NY 10006	212-509-2300	Clearing, Transact Business with the Public
Lightspeed Trading, LLC	8/18/2008	11/15/2010	5/19/2010	5/19/2010	NA	NA	Member TPH	1001 Avenue of the Americas 16th Floor New York, NY 10018	646-393-4800	Proprietary Trading
Lime Brokerage LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	11 E 44th Street Suite 705 New York, NY 10017	212-824-5000	Transact Business with the Public
Liquidnet, Inc.	9/1/2009	9/15/2010	NA	NA	NA	NA	Member TPH	498 7th Avenue 15th Floor New York, NY 10018	646-674-2000	Agency
Lupo Securities, LLC	NA	NA	NA	NA	8/1/1997	NA	Member TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	Market Maker, Proprietary Trading
Macquarie Capital (USA) Inc.	12/1/2009	NA	5/26/2010	5/27/2010	NA	NA	Member TPH	125 W 55th Street Level 22 New York, NY 10019	212-231-1000	Agency
Marathon Trading Group LLC	2/13/2015	NA	NA	NA	1/30/2013	NA	Member TPH	100 Matsonford Road Building 2, Suite 107 Wayne, PA 19087	610-254-4890	Market Maker, Proprietary Trading
Matrix Executions, LLC	8/18/2008	11/15/2010	NA	11/12/2015	2/1/2008	10/26/2010	Member TPH	601 S LaSalle Street Suite 300 Chicago, IL 60605	312-334-8000	Transact Business with the Public, Brokerage
Meadowhawk Capital, LLC	NA	NA	NA	NA	6/1/2007	NA	Member TPH	141 W Jackson Boulevard Suite 3750 Chicago, IL 60604	773-837-2612	Market Maker
Merrill Lynch Professional Clearing Corp.	8/18/2008	10/5/2010	5/14/2010	5/14/2010	4/8/1985	9/24/2010	Member TPH	One Bryant Park, 6th Floor NY-100-06-01 New York, NY 10036	646-743-1295	Clearing, Brokerage, Transact Business with the Public
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8/18/2008	10/4/2010	5/14/2010	5/14/2010	4/25/1973	9/27/2010	Member TPH	One Bryant Park New York, NY 10036	800-637-7455	Clearing, Transact Business with the Public, Brokerage, Market Maker, Proprietary Trading
Mint Global Markets, Inc.	NA	NA	5/26/2010	5/27/2010	NA	NA	Member TPH	1717 Route 6 Suite 102 Carmel, NY 10512	800-874-3039	Agency
Mizuho Securities USA, LLC	6/1/2010	1/3/2011	NA	NA	NA	NA	Member TPH	320 Park Avenue 12th Floor New York, NY 10022	212-209-9300	Agency
MKM Partners LLC	8/3/2009	NA	5/14/2010	5/14/2010	NA	NA	Member TPH	300 First Stamford Place 4th Floor East Wing Stamford, CT 06902	203-861-9060	Agency
MNR Executions, LLC	NA	NA	NA	NA	4/30/2008	NA	Member TPH	141 W Jackson Boulevard Suite 3900 Chicago, IL 60604	312-878-4704	Floor Broker, Transact Business with the Public
Monadnock Capital Management, LP	NA	NA	NA	NA	12/1/2014	NA	Member TPH	1845 Walnut Street Suite 940 Philadelphia, PA 19103	267-239-0367	Market Maker
Moors & Cabot, Inc.	NA	4/2/2012	NA	NA	NA	NA	Member TPH	111 Devonshire Street Boston, MA 02109	617-426-0500	Agency
Morgan Stanley & Co. International plc	NA	NA	NA	NA	4/12/2017	NA	Sponsored Participant	20 Bank Street Canary Wharf London, UK E14 4A	#####	
Morgan Stanley & Co. LLC	10/23/2008	9/1/2010	5/14/2010	5/14/2010	8/20/1980	9/24/2010	Member TPH	1585 Broadway New York, NY 10036	212-761-4000	Clearing, Market Maker, Proprietary Trading, Transact Business with the Public, Brokerage
Nasdaq Execution Services, LLC	8/19/2008	9/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	One Liberty Plaza 165 Broadway New York, NY 10006	212-231-5100	Limited Routing Facility of Nasdaq affiliated Exchanges
National Financial Services LLC	10/23/2008	10/4/2010	5/26/2010	5/27/2010	10/8/1987	4/16/2012	Member TPH	200 Seaport Boulevard Boston, MA 02210	617-563-7000	Clearing, Floor Broker, Transact Business with the Public
National Securities Corporation	7/1/2009	NA	NA	NA	NA	NA	Member TPH	One Union Square 600 University Street, Suite 2900 Seattle, WA 98101	206-622-7200	Agency
Needham & Company, LLC	10/23/2008	10/1/2010	NA	NA	NA	NA	Member TPH	445 Park Avenue New York, NY 10022	212-371-8300	Market Maker
Nomura Securities International, Inc.	10/23/2008	10/1/2010	5/26/2010	5/27/2010	9/1/2009	11/16/2010	Member TPH	Worldwide Plaza 309 W 49th Street New York, NY 10019	212-667-9000	Clearing, Transact Business with the Public, Proprietary Trading
Northern Trust Securities, Inc.	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	50 S LaSalle Street Chicago, IL 60603	312-557-2000	Market Maker
Northland Securities, Inc.	12/15/2010	12/15/2010	NA	NA	NA	NA	Member TPH	45 S 7th Street 20th Floor Minneapolis, MN 55402	612-851-5900	Market Maker, Proprietary Trading
Old Mission Capital, LLC	4/16/2012	4/16/2012	4/25/2012	4/25/2012	9/27/2017	NA	Member TPH	314 W Superior Suite 200 Chicago, IL 60654	312-260-3031	Market Maker
Olivetree Financial, LLC	NA	NA	9/1/2016	NA	NA	NA	Member TPH	420 Lexington Avenue Suite 800 New York, NY 10170	646-930-6600	Agency
Oppenheimer & Co. Inc.	NA	NA	NA	NA	5/17/1973	NA	Member TPH	85 Broad Street 22nd, 24th Floors New York, NY 10004	212-668-8000	Clearing, Transact Business with the Public
Optiver US, LLC	6/15/2009	NA	NA	NA	6/1/2005	9/24/2010	Member TPH	130 E Randolph Street 14th Floor Chicago, IL 60601	312-821-9500	Market Maker
Oscar Gruss & Son Incorporated	8/7/2017	NA	NA	NA	NA	NA	Member TPH	430 Park Avenue 6th Floor New York, NY 10022	212-419-4000	Agency
OTA LLC	8/18/2008	10/7/2010	NA	NA	NA	NA	Member TPH	One Manhattanville Road Purchase, NY 10577	914-694-5800	Institutional Trading

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PEAK6 Capital Management LLC	8/1/2014	NA	NA	2/1/2016	12/2/1997	NA	Member TPH	141 W Jackson Boulevard Suite 500 Chicago, IL 60604	312-444-8000	Proprietary Trading
PEAK6 Capital Management, LLC	11/3/2008	7/15/2011	NA	NA	NA	NA	Sponsored Participant	141 W Jackson Boulevard Suite 500 Chicago, IL 60604	312-362-2401	Market Maker
Penserra Securities, LLC	8/18/2008	10/6/2010	NA	NA	NA	NA	Member TPH	4 Orinda Way Suite 100-A Orinda, CA 94563	212-607-3190	Agency
Pershing LLC	8/18/2008	9/15/2010	5/26/2010	5/27/2010	2/21/1973	9/28/2010	Member TPH	One Pershing Plaza Jersey City, NJ 07399	201-413-2000	Clearing, Transact Business with the Public
Phillip Capital Inc.	NA	NA	NA	11/27/2017	NA	NA	Member TPH	141 W Jackson Boulevard Suite 3050 Chicago, IL 60604	312-356-9001	Clearing Services
Pictet Overseas Inc.	6/1/2015	6/1/2015	5/26/2010	5/27/2010	NA	NA	Member TPH	1000 de la Gauchetiere West Suite 3100 Montreal, Quebec H3B 4W5	514-288-8161	Agency
Piper Jaffray & Co.	10/15/2008	11/15/2012	5/14/2010	5/14/2010	NA	NA	Member TPH	800 Nicollet Mall Minneapolis, MN 55402	612-303-6000	Market Maker
Potamus Trading, LLC	4/15/2013	4/15/2013	4/11/2013	4/11/2013	NA	NA	Member TPH	2 Seaport Lane 8th Floor Boston, MA 02210	617-855-8722	Market Maker, Proprietary Trading
Princeton Alpha Management, LP	12/1/2015	12/1/2015	12/1/2015	12/1/2015	NA	NA	Sponsored Participant	61 Princeton Hightstown Road West Windsor, NJ 08550	609-269-9212	Agency
PTR, Inc.	NA	NA	NA	NA	8/2/1995	NA	Member TPH	1800 JFK Boulevard Suite 401 Philadelphia, PA 19103	267-909-8368	Floor Broker, Transact Business with the Public
Puma Capital, LLC	NA	NA	6/15/2016	6/15/2016	NA	NA	Member TPH	287 Bowman Avenue 3rd Floor Purchase, NY 10577	212-269-4100	Market Maker, Proprietary Trading
Pundion LLC	2/27/2017	2/27/2017	2/27/2017	2/27/2017	NA	NA	Member TPH	230 Park Avenue 10th Floor New York, NY 10169	718-618-4929	Proprietary Trading
Quantbot Technologies LP	3/27/2018	3/27/2018	3/27/2018	3/27/2018	NA	NA	Sponsored Participant	369 Lexington Avenue New York, NY 10017	212-622-6510	Proprietary Trading
Quantex Clearing, LLC	10/3/2011	12/27/2011	5/17/2011	5/17/2011	NA	NA	Member TPH	70 Hudson Street Hoboken, NJ 07030	201-706-7157	Clearing Services
Quantlab Securities LP	8/18/2008	11/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	3 Greenway Plaza Suite 200 Houston, TX 77046	713-333-3700	Transact Business with the Public, Brokerage
Quiet Light Securities, LLC	NA	NA	NA	NA	5/1/2001	NA	Member TPH	141 W Jackson Boulevard Suite 2020A Chicago, IL 60604	312-431-0573	Market Maker, Proprietary Trading
R.W. Pressprich & Co.	2/17/2009	11/15/2010	6/2/2010	6/2/2010	NA	NA	Member TPH	452 5th Avenue New York, NY 10018	212-832-6200	Agency
Rackson Asset Management, LLC	10/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	2000 Broadway Suite 22C New York, NY 10023	212-724-2567	Proprietary Trading
Rainier Investment Management, Inc.	1/4/2010	NA	NA	NA	NA	NA	Sponsored Participant	601 Union Street Suite 2801 Seattle, WA 98101	206-518-6658	Hedge Fund
RBC Capital Markets, LLC	9/18/2008	10/14/2010	5/14/2010	5/14/2010	11/24/1993	10/19/2010	Member TPH	3 World Financial Center 200 Vesey Street New York, NY 10281	212-858-7000	Clearing, Proprietary Trading, Transact Business with the Public
Robert W. Baird & Co. Incorporated	10/23/2008	1/3/2011	NA	NA	NA	NA	Member TPH	777 E Wisconsin Avenue Milwaukee, WI 53202	414-765-3500	Market Maker
Ronin Capital, LLC	NA	NA	NA	NA	12/17/2001	NA	Member TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5000	Market Maker
Ronin Professional, LLC	8/18/2008	10/1/2010	5/25/2010	5/27/2010	1/2/2008	10/20/2010	Member TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5400	Order Flow Provider, Transact Business with the Public, Brokerage
Rosenblatt Securities Inc.	8/18/2008	10/6/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	40 Wall Street 59th Floor New York, NY 10005	212-607-3100	Agency
Roth Capital Partners, LLC	8/18/2008	NA	NA	NA	NA	NA	Member TPH	888 San Clemente Suite 400 Newport Beach, CA 92660	949-720-5700	Market Maker
SAC Capital Advisors, LP	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	72 Cummings Point Road Stamford, CT 06902	203-890-2275	Hedge Fund
Safra Securities LLC	NA	NA	5/26/2010	5/27/2010	NA	NA	Member TPH	546 5th Avenue New York, NY 10036	212-704-5500	Market Maker
SageTrader, LLC	3/1/2016	6/5/2017	6/5/2017	6/1/2016	NA	NA	Member TPH	340 Pine Street Suite 501 San Francisco, CA 94104	415-293-3894	Public Customer Business
SAL Equity Trading, GP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-3000	Agency, Institutional Trading
Sanford C. Bernstein & Co, LLC	9/10/2008	10/21/2010	5/26/2010	5/27/2010	8/13/2013	NA	Member TPH	1345 Avenue of the Americas New York, NY 10105	212-969-1000	Clearing, Proprietary Trading, Transact Business with the Public
Santander Investment Securities Inc.	4/15/2009	1/3/2011	NA	NA	NA	NA	Member TPH	45 E 53rd Street New York, NY 10022	212-350-3500	Institutional Trading
Scotia Capital (USA) Inc.	3/2/2009	9/15/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	250 Vesey Street New York, NY 10281	212-225-6500	Institutional Trading
Scottrade, Inc.	6/1/2010	11/15/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	700 Maryville Centre Drive St. Louis, MO 63141	314-965-1555	Public Customer Business
Seven Points Capital, LLC	NA	NA	5/14/2010	NA	NA	NA	Member TPH	805 3rd Avenue 15th Floor New York, NY 10022	212-760-0760	Agency
SG Americas Securities, LLC	9/17/2008	11/15/2011	5/14/2010	5/14/2010	4/23/2004	1/2/2015	Member TPH	245 Park Avenue New York, NY 10167	212-278-6000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
Silver Fern Investments, LLC	8/20/2015	8/20/2015	8/20/2015	8/20/2015	NA	NA	Sponsored Participant	533 2nd Street Encinitas, CA 92024	858-947-8650	Proprietary Trading
Simplex Trading, LLC	3/16/2015	NA	NA	4/13/2017	8/12/2010	3/1/2017	Member TPH	230 S LaSalle Street Suite 4-100 Chicago, IL 60604	312-360-2440	Market Maker, Proprietary Trading
SMBC Nikko Securities America, Inc.	8/7/2017	8/7/2017	8/7/2017	8/7/2017	NA	NA	Member TPH	277 Park Avenue 5th Floor New York, NY 10172	212-224-5039	Institutional Trading
SogoTrade, Inc.	NA	NA	NA	6/19/2017	NA	NA	Member TPH	11 Broadway Suite 514 New York, NY 10004	646-885-6486	Public Customer Business
Stifel, Nicolaus & Company, Incorporated	8/18/2008	NA	6/2/2010	6/2/2010	NA	NA	Member TPH	501 N Broadway St. Louis, MO 63102	314-342-2000	Agency

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Summit Securities Group, LLC	7/16/2012	7/16/2012	8/20/2012	8/20/2012	6/6/2012	NA	Member TPH	55 Broadway Suite 2102 New York, NY 10006	646-738-4066	Market Maker, Proprietary Trading
Sumo Captial, LLC	7/15/2013	NA	NA	10/15/2015	3/3/2008	NA	Member TPH	440 S LaSalle Street Suite 2101 Chicago, IL 60605	312-324-0326	Market Maker, Proprietary Trading
SumRidge Partners, LLC	NA	NA	NA	12/27/2017	NA	NA	Member TPH	111 Town Square Place Suite 320 Jersey City, NJ 07310	201-898-2520	Proprietary Trading
Sun Trading LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	9/3/2013	NA	Member TPH	100 S Wacker Drive Suite 300 Chicago, IL 60606	312-924-4777	Market Maker, Proprietary Trading
Susquehanna Financial Group, LLLP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	800-825-9550	Agency, Institutional Trading
Susquehanna Investment Group	NA	NA	NA	NA	5/1/1987	NA	Member TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2600	Market Maker
Susquehanna Securities	10/15/2014	10/15/2014	10/15/2014	10/15/2014	4/4/1994	9/24/2010	Member TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2600	Market Maker, Proprietary Trading
Synergy Capital Management, LLC	8/1/2016	NA	NA	NA	6/5/2007	NA	Member TPH	141 W Jackson Boulevard Suite 1530 Chicago, IL 60604	312-986-8869	Proprietary Trading
TD Ameritrade Clearing, Inc.	5/3/2011	5/3/2011	NA	5/27/2010	NA	NA	Member TPH	200 S 108th Avenue Omaha, NE 68154	800-669-3900	Public Customer Business, Clearing Services
Telsey Advisory Group, LLC	1/24/2011	8/15/2014	NA	NA	NA	NA	Member TPH	555 5th Avenue 7th Floor New York, NY 10017	212-973-9700	Public Customer Business
Tewksbury Investment Fund, Ltd.	7/1/2011	7/1/2011	1/6/2015	1/6/2015	NA	NA	Sponsored Participant	Washington Mall I 20th Church Street, 4th Floor Hamilton, HM 11 Bermuda	610-971-5000	Proprietary Trading
Tewksbury Investment Fund, Ltd.	10/23/2008	11/15/2010	NA	NA	NA	NA	Sponsored Participant	Washington Mall I 20th Church Street, 4th Floor Hamilton, HM 11 Bermuda	212-310-7076	Proprietary Trading
Themis Trading LLC	8/18/2008	10/1/2010	NA	NA	NA	NA	Member TPH	10 Town Square Suite 100 Chatham, NJ 07928	973-665-9600	Agency
ThinkTrade, LLC	2/1/2010	10/20/2010	1/9/2015	1/9/2015	NA	NA	Sponsored Participant	2210 Encintas Boulevard Suite 1 Encintas, CA 92024	760-452-2451	Proprietary Trading
Timber Hill LLC	NA	NA	NA	NA	12/27/1996	12/15/2010	Member TPH	One Pickwick Plaza Suite 200 Greenwich, CT 06830	203-618-5800	Clearing, Market Maker
TJM Investments, LLC	NA	NA	NA	NA	3/11/2013	NA	Member TPH	318 W Adams Street 9th Floor Chicago, IL 60606	312-432-5100	Floor Broker, Transact Business with the Public
TMT Investments, LLC	NA	NA	NA	NA	4/2/2008	NA	Member TPH	440 S LaSalle Street Suite 1729 Chicago, IL 60605	312-362-3024	Market Maker
Tradebot Systems, Inc.	8/18/2008	9/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	1251 NW Briarcliff Parkway Suite 700 Kansas City, MO 64116	816-285-6400	Proprietary Trading
TradeKing	10/15/2009	11/15/2010	NA	NA	NA	NA	Member TPH	888 E Las Olas Boulevard Suite 300 Fort Lauderdale, FL 33301	877-495-5464	Agency
TradeStation Securities, Inc.	8/18/2008	9/1/2010	5/25/2010	5/25/2010	NA	NA	Member TPH	8050 SW 10th Street Suite 2000 Plantation, FL 33324	954-652-7900	Market Maker
TRC Helepolis, Ltd.	12/11/2009	NA	NA	NA	NA	NA	Sponsored Participant	377 Broadway 11th Floor New York, NY 10013	646-472-1792	Proprietary Trading
TRC Markets LLC	4/13/2017	4/13/2017	4/13/2017	4/13/2017	NA	NA	Member TPH	710 Johnnie Dodds Boulevard Suite 300 Mt. Pleasant, SC 29464	917-388-8644	Agency
Trinity Executions, LLC	NA	NA	NA	NA	11/1/2011	NA	Member TPH	141 W Jackson Boulevard Suite 3900 Chicago, IL 60604	312-878-4704	Floor Broker, Transact Business with the Public
Tudor, Pickering, Holt & Co. Securities, Inc.	8/18/2008	10/17/2011	NA	NA	NA	NA	Member TPH	1111 Bagby Suite 4900 Houston, TX 77002	713-333-7100	Agency
Two Sigma Investments, LLC	9/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	100 Avenue of the Americas 4th Floor New York, NY 10013	212-775-6678	Proprietary Trading
Two Sigma Partners Master Fund, Ltd.	3/2/2009	NA	NA	NA	NA	NA	Sponsored Participant	100 Avenue of the Americas 4th Floor New York, NY 10013	212-775-6678	Proprietary Trading
Two Sigma Securities, LLC	7/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	100 Avenue of the Americas 4th Floor New York, NY 10013	646-292-6643	Proprietary Trading
Two Sigma Securities, LLC	10/1/2009	10/5/2010	5/27/2010	5/27/2010	9/15/2017	NA	Member TPH	100 Avenue of the Americas 19th Floor New York, NY 10013	212-625-5700	Market Maker
U.S. Securities, Intl. Corp.	NA	NA	NA	NA	7/3/1973	NA	Member TPH	120 Broadway Suite 1017 New York, NY 10271	212-227-0800	Transact Business with the Public
UBS Financial Services Inc.	NA	NA	NA	NA	12/11/1972	NA	Member TPH	1200 Harbor Boulevard Weehawken, NJ 07086	201-352-3000	Clearing, Transact Business with the Public
UBS Securities LLC	10/15/2008	10/1/2010	4/12/2010	4/12/2010	10/1/1998	10/8/2010	Member TPH	1285 Avenue of the Americas New York, NY 10019	203-719-3000	Clearing, Proprietary Trading, Transact Business with the Public
Ustocktrade Securities, Inc.	4/17/2015	NA	NA	NA	NA	NA	Member TPH	275 Grove Street Suite 2-400 Newton, MA 02466	617-340-3041	Public Customer Business, Proprietary Trading
ViewTrade Securities, Inc.	8/18/2008	11/15/2010	6/10/2010	6/10/2010	NA	NA	Member TPH	7280 W Palmetto Park Road Suite 310 Boca Raton, FL 33433	561-620-0306	Agency
Virtu Americas LLC	9/15/2009	10/14/2010	1/3/2011	1/3/2011	9/18/2009	3/17/2011	Member TPH	300 Vesey Street New York, NY 10282	646-682-6000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
Virtu Financial BD LLC	11/17/2008	10/7/2010	5/27/2010	5/27/2010	3/1/2010	6/12/2012	Member TPH	307 Camp Craft Road Austin, TX 78743	800-544-7508	Proprietary Trading
Virtu Financial Capital Markets LLC	8/18/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	300 Vesey Street New York, NY 10282	212-418-0100	Proprietary Trading
Vision Financial Markets LLC	4/1/2009	11/15/2010	7/13/2012	7/13/2012	12/1/2006	NA	Member TPH	120 Long Ridge Road 3 North Stamford, CT 06902	203-388-2700	Clearing, Transact Business with the Public
Volant Execution, LLC	6/15/2011	NA	NA	10/1/2015	4/12/2005	9/24/2010	Member TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	Clearing, Brokerage
Volant Liquidity, LLC	4/15/2011	NA	5/27/2010	5/27/2010	2/1/2010	3/23/2011	Member TPH	250 Vesey Street Suite 2601 New York, NY 10281	646-804-7900	Market Maker, Order Flow Provider, Brokerage
Wall Street Access	11/3/2008	10/17/2011	5/27/2010	5/27/2010	NA	NA	Member TPH	17 Battery Place 11th Floor New York, NY 10004	212-709-9400	Agency

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
Walleye Trading LLC	12/1/2008	11/12/2010	NA	NA	6/1/2006	NA	Member TPH	2800 Niagara Lane North Plymouth, MN 55447	952-345-8611	Market Maker
Wedbush Securities Inc.	8/18/2008	9/1/2010	5/27/2010	5/27/2010	2/23/2012	3/8/2012	Member TPH	1000 Wilshire Boulevard Suite 900 Los Angeles, CA 90017	213-688-8090	Clearing
Wells Fargo Clearing Services, LLC	7/1/2016	NA	NA	NA	11/14/2016	NA	Member TPH	One N Jefferson Avenue Mail Code: H0004-050 St. Louis, MO 63103	314-875-3000	Clearing, Transact Business with the Public
Wells Fargo Securities, LLC	8/18/2008	10/11/2010	6/9/2010	6/9/2010	4/1/2014	3/31/2014	Member TPH	550 S Tryon Street, 6th Floor D1086-060 Charlotte, NC 28202	704-410-1913	Clearing, Proprietary Trading
Western International Securities, Inc.	8/18/2008	11/15/2010	NA	NA	NA	NA	Member TPH	70 S Lake Avenue Suite 700 Pasadena, CA 91101	626-793-7717	Market Maker
Wolverine Execution Services, LLC	8/18/2008	10/19/2010	5/14/2010	5/14/2010	3/1/2006	9/24/2010	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Clearing, Floor Broker, Transact Business with the Public, Brokerage
Wolverine Securities, LLC	NA	NA	NA	5/31/2017	NA	NA	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Market Maker
Wolverine Trading, LLC	10/3/2011	NA	NA	10/1/2015	7/12/1994	9/24/2010	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Market Maker, Proprietary Trading
X-Change Financial Access, LLC	NA	NA	NA	NA	5/1/2003	NA	Member TPH	440 S LaSalle Street Suite 2900 Chicago, IL 60605	312-235-0320	Clearing, Floor Broker, Transact Business with the Public
XR Securities LLC	1/15/2009	11/15/2010	5/10/2012	5/10/2012	11/30/2007	NA	Member TPH	550 W Jackson Boulevard Suite 1000 Chicago, IL 60661	312-244-4500	Market Maker, Proprietary Trading