



November 6, 2023

Via Federal Express

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

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

Dear Mrs. Jackson:

On behalf of Cboe Exchange, Inc. (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 exhibit¹:

- 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,

A handwritten signature in cursive script that reads "Kyle Murray".

Kyle Murray
VP, Legal Head of Global Listings
913-815-7121
Signature executed at 9:00am on 11/06/23

Enclosure

Attachment

¹ See Attachment for a comprehensive list of updates to Exhibit M

Summary of changes made to Exhibit M:

- Approval – Membership
Erudite Trading LLC

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Effective Date	C2 Effective Date	Type of User	Address	Phone Number	Primary Activities
78 North Investments ApS	8/24/2020	8/24/2020	8/24/2020	8/24/2020	NA	NA	Sponsored Participant	Vimmelskaffet 43 3rd Floor Copenhagen Denmark 1161	45 88707858	Proprietary Trading
ABN AMRO Clearing USA 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
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
All Options USA LLC	8/8/2023	NA	NA	8/8/2023	8/8/2023	8/8/2023	Member TPH	114 W. 7th. St Suite 1200 Austin, TX 78701	512-518-4036 x109	Market Maker, Proprietary Trading
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
Alpha Trading, LP	2/22/2019	2/22/2019	2/22/2019	2/22/2019	NA	NA	Sponsored Participant	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
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
ATM Execution LLC dba Cowen Electronic	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
Axos Financial 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
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
BEC Capital, LLC	11/1/2022	11/1/2022	11/1/2022	11/1/2022	NA	NA	Sponsored Participant	1811 Silverdale Road Wilmington, DE 19808	917-662-5577	
Belvedere Trading LLC	11/1/2011	NA	11/29/2011	10/16/2018	1/3/2005	4/4/2011	Member TPH	10 S Riverside Plaza Suite 2100 Chicago, IL 60606	312-893-3750	Market Maker, Proprietary Trading
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
Black Edge Securities LLC	NA	NA	NA	NA	10/16/2020	NA	Member TPH	811 W. Fulton Market 400 _____ Ste. 60607 Chicago, IL	608-213-4825	Market Maker
Bluefin Capital Management, LLC	8/3/2009	6/1/2015	NA	NA	NA	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
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	1/30/2019	1/30/2019	1/30/2019	1/30/2019	NA	NA	Sponsored Participant	300 N LaSalle Street Suite 2060 Chicago, IL 60654	708-967-6843	Market Maker
Boerboel Trading LP	10/15/2018	10/15/2018	10/15/2018	10/15/2018	NA	NA	Sponsored Participant	Maples Corporate Services PO Box 309, Ugland House Cayman Islands KY1-1104	44-203-621-0363	Proprietary Trading
Boerboel Trading LP	5/25/2021	5/25/2021	5/25/2021	5/25/2021	NA	NA	Sponsored Participant	Maples Corporate Services PO Box 309, Ugland House Cayman Islands KY1-1104	44-203-621-0363	Proprietary Trading
BofA Securities, Inc.	9/19/2018	9/19/2018	9/19/2018	9/19/2018	5/13/2019	5/13/2019	Member TPH	One Bryant Park New York, NY 10036	201-671-5685	Clearing Services, Firm Proprietary Trading, Public Customer Business
BOLT-X LLC	8/18/2008	10/1/2010	5/25/2010	5/27/2010	1/2/2008	NA	Member TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5400	Order Flow Provider, Transact Business with the Public, Brokerage
BTIG, LLC	8/18/2008	11/15/2010	5/25/2010	5/27/2010	2/10/2022	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 LLC	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.	NA	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
Casey Securities LLC	NA	NA	NA	11/11/2021	NA	NA	Member TPH	One Montgomery Street Floor _____ San Francisco, CA 94104	415-954-5590	Electronic Execution, Transact Business with the Public
Cboe Trading, Inc.	10/23/2008	9/1/2010	5/14/2010	5/14/2010	7/26/2019	4/18/2018	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	NA	NA	Member TPH	211 Main Street San Francisco, CA 94105	415-636-7000	Clearing, Transact Business with the Public
Chimera Securities, LLC	11/1/2022	NA	NA	11/1/2022	NA	NA	Sponsored Participant	27 Union Square West 4th Floor New York, NY 10003	646-597-6146	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
Citigroup Global Markets Inc.	9/24/2008	12/15/2010	5/25/2010	5/27/2010	5/2/2011	6/3/2019	Member TPH	390-388 Greenwich Street New York, NY 10013	212-816-6000	Clearing, Proprietary Trading, Transact Business with the Public

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Effective Date	C2 Effective Date	Type of User	Address	Phone Number	Primary Activities
Clarksons 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
Clear Street LLC	3/21/2023	3/21/2023	3/21/2023	3/21/2023	NA	NA	Sponsored Participant	55 Broadway Suite 2102 New York, NY 10006	646-738-4068	Public Customer Business, Clearing, Proprietary Trading
Clear Street Markets, LLC	7/16/2012	7/16/2012	8/20/2012	8/20/2012	6/6/2012	3/22/2019	Member TPH	55 Broadway Suite 2102 New York, NY 10006	646-738-4066	Market Maker, Proprietary Trading
Clear Street, LLC	3/18/2019	8/14/2019	8/14/2019	8/14/2019	NA	NA	Member TPH	55 Broadway Suite 2102 New York, NY 10006	646-738-4068	Public Customer Business, Clearing, Proprietary Trading
Clearpool Execution Services, LLC	5/15/2014	5/15/2014	6/16/2014	6/16/2014	NA	NA	Member TPH	17 State Street 38h Floor New York, NY 10004	212-531-8500	Public Customer Business
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
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	12/13/2019	12/13/2019	3/6/2023	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
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
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
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 LLC	4/1/2010	10/6/2010	NA	10/16/2015	4/5/1999	1/18/2023	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
Direct Alpha LLC	10/31/2022	10/31/2022	10/31/2022	10/31/2022	NA	NA	Sponsored Participant	533 2nd Street Encinitas, CA 92024	858-947-8650	Proprietary Trading
DriveWealth Institutional LLC	3/30/2022	3/30/2022	3/30/2022	3/30/2022	NA	NA	Member TPH	15 Exchange Place Suite 1110 Jersey City, NJ 11694	201-207-1200	Principal Facilitation/Clearing Services
DRW Commodities LLC	8/6/2020	8/6/2020	8/6/2020	8/6/2020	NA	NA	Sponsored Participant	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1000	Proprietary Trading
DRW Europe B.V.	12/14/2020	12/14/2020	12/14/2020	12/14/2020	NA	NA	Sponsored Participant	540 W Madison Street Suite 2500 Chicago, IL 60661	44-207-031-1369	Proprietary Trading
DRW Execution Services, LLC	11/19/2019	11/19/2019	11/19/2019	11/19/2019	NA	NA	Member TPH	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1090	Proprietary Trading
DRW Global Markets Ltd.	2/22/2019	2/22/2019	4/8/2019	4/8/2019	NA	NA	Sponsored Participant	540 W. Madison Suite 2500 Chicago, IL 60661	312-542-1193	Proprietary Trading
DRW Global Markets Ltd.	12/2/2019	12/2/2019	12/2/2019	12/2/2019	NA	NA	Sponsored Participant	540 W. Madison Suite 2500 Chicago, IL 60661	312-542-1193	Proprietary Trading
DRW Investments, LLC	2/18/2021	NA	NA	NA	NA	NA	Sponsored Participant	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1223	Proprietary Trading
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
DRW Singapore Ltd.	10/4/2021	NA	NA	10/4/2021	NA	NA	Sponsored Participant	8 Marina View Asia Square Tower 1 #32-05 Singapore 018960	312-542-1005	Proprietary Trading
DRW Singapore Ltd.	11/19/2018	NA	NA	11/19/2018	NA	NA	Sponsored Participant	8 Marina View Asia Square Tower 1 #32-05 Singapore 018960	312-542-1005	Proprietary Trading
DV Equities, LLC	NA	NA	NA	NA	8/30/2021	NA	Member TPH	216 W. Jackson Blvd. - 3rd Floor; Chicago, IL 60606	312-837-0649	Market Maker, Proprietary Trading
Dynamex Trading LLC	NA	NA	NA	NA	10/12/2023	NA	Member TPH	11 Broadway, Suite 360 New York, NY 10004	646-827-6074	Electronic Execution, Transact Business with the Public
Dynamic Technology Lab Pte. Ltd.	11/5/2018	11/5/2018	11/5/2018	11/5/2018	NA	NA	Sponsored Participant	07-00, 178 Clemenceau Avenue Singapore 239926	656-610-4693	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
Electronic Transaction Clearing, Inc.	10/23/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	660 S Figueroa Street Los Angeles, CA 90017	949-533-1885	Market Maker
Elequin Securities LLC	12/28/2021	NA	NA	NA	12/27/2021	NA	Member TPH	1359 Broadway York, NY 10018	New 646-475-6430	Proprietary Trading
Erudite Trading LLC	NA	NA	NA	NA	11/2/2023	NA	Member TPH	555 Fayetteville St., Suite 300 Raleigh, NC 27601	845-461-4114	Proprietary Trading
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
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	NA	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Proprietary Trading
Flow Traders U.S. LLC	NA	NA	NA	10/12/2022	NA	NA	Sponsored Participant	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Proprietary Trading
FR Trading LLC	NA	NA	NA	NA	6/1/2023	NA	Member TPH	225 Liberty Street, 30th Floor New York, NY 10281	212-393-1420	Market Maker, 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
Gelber Securities, LLC	NA	NA	NA	NA	3/19/2021	NA	Member TPH	350 N. Orleans 7th Floor Chicago, IL 60654	Suite 312-408-6659	Market Maker, Proprietary Trading

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Effective Date	C2 Effective 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
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
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 Pier Fintech LLC	NA	NA	NA	8/25/2022	NA	NA	Member TPH	245 Summer Street Boston, MA 02210	617-392-2773	Public Customer Business
Group One Trading, LP	6/2/2015	NA	NA	9/29/2015	11/23/1994	9/11/2020	Member TPH	425 S Financial Place Suite 3400 Chicago, IL 60605	312-347-8864	Market Maker, Proprietary Trading
GTS Securities LLC	12/17/2013	5/1/2012	6/2/2014	6/2/2014	11/29/2019	2/25/2020	Member TPH	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Market Maker, Proprietary Trading
GTS Securities LLC	10/25/2022	10/25/2022	10/25/2022	10/25/2022	NA	NA	Sponsored Participant	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Market Maker, 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
HAP Trading LLC	1/8/2020	1/8/2020	1/8/2020	1/8/2020	NA	NA	Sponsored Participant	395 Hudson Street Suite 701 New York, NY 10014	212-380-5100	Proprietary Trading
Headlands Technologies LLC	10/15/2018	10/15/2018	10/15/2018	10/15/2018	NA	NA	Sponsored Participant	155 N. Wacker Drive, Suite 1900 Chicago, IL 60606	312-601-8649	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
HRT Financial LP	2/1/2010	10/1/2010	5/18/2010	5/18/2010	1/24/2011	1/24/2011	Member TPH	3 World Trade Center 175 Greenwich Street, 76th 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
IBKR Securities Services 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
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 Chicago, LLC d/b/a 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
IMC Chicago, LLC d/b/a IMC Financial Markets	11/5/2018	11/5/2018	11/5/2018	11/5/2018	NA	NA	Sponsored Participant	233 S Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3300	Market Maker, Proprietary Trading
IMC Chicago, LLC d/b/a IMC Financial Markets	8/25/2023	NA	NA	NA	NA	NA	Sponsored Participant	233 S Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3300	Market Maker, Proprietary Trading
IMC Securities LLC	1/24/2019	NA	NA	NA	10/1/2007	NA	Member TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	Market Maker
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
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	1/2/2019	Member TPH	250 Vesey Street 5th Floor New York, NY 10281	646-759-6000	Market Maker, Proprietary Trading
Jane Street Execution Services LLC	1/24/2019	1/24/2019	1/24/2019	1/24/2019	NA	NA	Member TPH	250 Vesey Street 6th Floor New York, NY 10281	646-759-6381	Proprietary Trading
Jane Street Options, LLC	4/15/2016	12/13/2022	12/13/2022	11/9/2018	5/2/2005	1/2/2019	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
Jump Execution, LLC	6/27/2022	6/27/2022	6/27/2022	6/27/2022	NA	NA	Member TPH	600 W Chicago Avenue Suite 600 Chicago, IL 60654	312-205-8327	Market Maker, Proprietary Trading, Agency Execution
Jump Trading, LLC	8/18/2008	10/1/2010	5/14/2010	5/14/2010	4/2/2012	NA	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
Lampost Capital LC	NA	NA	NA	1/19/2021	NA	NA	Member TPH	1900 Glades Road Suite 205 Boca Raton, FL 33431	561-883-0454	Wholesale Execution
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

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Lightspeed Financial Services Group LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	1001 Avenue of the Americas 16th Floor New York, NY 10018	212-824-5000	Transact Business with the Public
Lime Trading Corp.	8/18/2020	8/18/2020	8/18/2020	8/18/2020	NA	NA	Member TPH	1 Penn Plaza, 16th Floor New York, NY 10119	310-947-9044	Public Customer Business
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
Marex Capital Markets Inc.	NA	NA	NA	NA	3/1/2019	6/7/2019	Member TPH	140 E. 45th Street 10th Floor New York, NY 10017	212-618-2800	Clearing, Public Customer Business
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
Maven Global Markets Trading LLP	NA	NA	NA	NA	7/18/2022	NA	Member TPH	353 N. Clark St., Suite 1750 Chicago, IL 60654	44 777 615 1645	Market Maker
MBX Clearing LLC	NA	NA	NA	NA	8/15/2022	NA	Member TPH	38955 Hills Tech Drive Farmington Hills, MI 48331	248-987-7427	Proprietary Trading
MD Vanilla B.V. dba Maverick Derivatives	NA	NA	NA	NA	9/1/2022	NA	Member TPH	Strawinskylaan 377 Amsterdam, 1077XX Netherlands	31 20 238 4192	Proprietary Trading
Merrill Lynch Professional Clearing Corp.	8/18/2008	10/5/2010	5/14/2010	5/14/2010	N/A	NA	Member TPH	One Bryant Park, 6th Floor NY1-100-06-01 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	NA	Member TPH	One Bryant Park New York, NY 10036	800-637-7455	Clearing, Transact Business with the Public, Brokerage, Market Maker, Proprietary Trading
Mirae Asset Securities (USA) Inc.	10/12/2022	NA	NA	NA	NA	NA	Member TPH	810 7th Avenue New York, NY 10019	646-968-2035	Market Maker, Public Customer Business, Clearing Services, Proprietary Trading
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
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 Bank of Canada Financial Inc.	2/18/2022	2/18/2022	NA	NA	NA	NA	Member TPH	The Park Tower 65 E. 55th Street, 8th Floor New York, NY 10022	212-546-7663	Proprietary Trading
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
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
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
Old Mission Markets LLC	NA	NA	12/13/2019	NA	4/25/2023	NA	Member TPH	1 N Dearborn Street 8th Floor Chicago, IL 60602	312-260-3044	Electronic Execution, Transact Business with the Public
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	5/30/2018	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
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
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 Sandler & 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
Prime Capital Markets LLC	NA	NA	NA	NA	4/15/2021	NA	Member TPH	111 W Jackson Boulevard Suite 1310 Chicago, IL 60604	312-986-7430	Proprietary Trading
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
Pundion LLC	10/15/2018	10/15/2018	10/15/2018	10/15/2018	NA	NA	Sponsored Participant	230 Park Avenue 10th Floor New York, NY 10169	718-618-4929	Proprietary Trading
QTrade Capital Partners LLC	7/12/2022	7/12/2022	7/12/2022	7/12/2022	NA	NA	Sponsored Participant	240 North Avenue West, Suite 301 Westfield, NJ 07090	908-232-5692	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
Quantlab Brokerage, LLC	12/9/2019	12/9/2019	12/9/2019	12/9/2019	NA	NA	Member TPH	3 Greenway Plaza Suite 200 Houston, TX 77046	713-333-3704	Public Customer Business
Qube Research & Technologies Limited	7/8/2022	7/8/2022	12/13/2022	12/13/2022	NA	NA	Sponsored Participant	21 Palmer Street 7th Floor London SW1H 0AD	44-20-7072-2960	
Radix Trading LLC	11/5/2018	11/5/2018	11/5/2018	11/5/2018	NA	NA	Sponsored Participant	353 N Clark Street Suite 3200 Chicago, IL 60654	773-377-8080	Research Firm
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
RFA Securities LLC					9/1/2022		Member TPH	2929 Walnut Street, 8th Floor Philadelphia, PA 19104	212-634-9365	Floor Broker

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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
Rosenblatt Securities Inc.	8/18/2008	NA	NA	NA	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
RQD* Clearing, 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
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
Scientech Master Fund, Ltd.	4/21/2021	4/21/2021	4/21/2021	4/21/2021	NA	NA	Sponsored Participant	101 Hudson Street Suite 2177 Jersey City, NJ 07302	201-253-5141	Proprietary 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
Sea Otter Securities Group LLC	10/9/2018	10/9/2018	NA	10/9/2018	NA	NA	Sponsored Participant	107 Grand Street 7th Floor New York, NY 10013	646-762-9972	Proprietary Trading
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
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
Simplex Trading, LLC	9/26/2022	7/12/2022	9/26/2022	9/26/2022	NA	NA	Sponsored Participant	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
SpeedTrader 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
Squarepoint Ops LLC	1/23/2023	1/23/2023	1/23/2023	1/23/2023	NA	NA	Sponsored Participant	250 W 55th Street 32nd Floor New York, NY 10019	646-868-1508	Proprietary Trading
SRT Securities LLC	NA	5/18/2020	NA	NA	10/27/1995	NA	Member TPH	666 5th Avenue 14th Floor New York, NY 10103	212-841-4567	Floor Broker, Transact Business with the Public, Brokerage
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
Sumo Capital, LLC	NA	NA	NA	NA	3/3/2008	NA	Member TPH	440 S LaSalle Street Suite 2101 Chicago, IL 60605	312-324-0326	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, LLC	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
TD Ameritrade Clearing, Inc.	NA	NA	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.	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
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
TOR Brokerage LLC	8/23/2021	8/23/2021	8/23/2021	8/23/2021	NA	NA	Member TPH	9019 Old River Road North Bergen, NJ 07047	201-941-0002	ATS
Tower Principal Markets LLC	9/7/2023	9/7/2023	9/7/2023	9/7/2023	NA	NA	Member TPH	111 Coleman Blvd, Suite 404 Mount Pleasant, SC 29464	843-606-0603	Proprietary Trading
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
TradePro Securities Inc.	2/19/2020	2/19/2020	2/19/2020	2/19/2020	NA	NA	Member TPH	2307 Douglas Road, Suite 301 Miami, FL 33145	631-804-0396	Public Customer Business
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
TradeUp Securities Inc.	NA	NA	NA	2/6/2023	NA	NA	Member TPH	101 Eisenhower Parkway Roseland, NJ 07068	973-228-9871	Trading and execution for clients
TradeZero America Inc.	NA	NA	NA	9/14/2021	NA	NA	Member TPH	68 34th Street, #B513 Brooklyn, NY 11232	718-7409-4925	Public Customer Business
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	11/16/2022	NA	Member TPH	710 Johnnie Dodds Boulevard Suite 300 Mt. Pleasant, SC 29464	917-388-8644	Agency; Electronic Execution, Transact Business with the Public
Tudor, Pickering, Holt & Co. Securities LLC	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

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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	7/18/2018	Member TPH	100 Avenue of the Americas 19th Floor New York, NY 10013	212-625-5700	Market Maker, Broker
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
Ultraviolet Securities LLC	6/17/2019	6/17/2019	6/17/2019	6/17/2019	NA	NA	Sponsored Participant	151 Bodman Place Suite 301 Red Bank, NJ 07701	732-450-7462	Proprietary Trading
Ultraviolet Securities LLC	10/24/2019	10/24/2019	10/24/2019	10/24/2019	NA	NA	Sponsored Participant	151 Bodman Place Suite 301 Red Bank, NJ 07701	732-450-7462	Proprietary Trading
Valuable Capital Securities	NA	10/10/2023	10/10/2023	NA	NA	NA	Member TPH	100 Spectrum Center Drive Suite 750 Irvine, CA 92618	949-942-1643	Clearing Services
Vanaheim Securities, LLC	NA	NA	NA	NA	6/1/2022	NA	Member TPH	425 S Financial Place Suite 3200 Chicago, IL 60605	312-379-0202	Market Maker
Velocity Capital, LLC	NA	NA	NA	NA	11/5/2021	NA	Member TPH	100 Wall Street Suite 502 New York, NY 10005	646-568-2855	Clearing, Proprietary Trading
Velocity Clearing, LLC	10/3/2011	12/27/2011	5/17/2011	5/17/2011	10/3/2022	NA	Member TPH	1301 Route 36, Suite 109 Hazlet, NJ 07730	929-489-8845	Clearing, Electronic Execution, Proprietary Trading, Transact Business with the Public
Velox Clearing LLC	9/5/2019	9/5/2019	9/5/2019	9/5/2019	NA	NA	Member TPH	2400 E. Katella Ave Suite 725 Anaheim, CA 92806	949-352-4694	Clearing Services
Verilion Fund Management LLC	10/21/2019	10/21/2019	10/21/2019	10/21/2019	NA	NA	Sponsored Participant	1 American Lane Greenwich, CT 06831	203-742-7711	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
Vision Financial Markets LLC	4/1/2009	11/15/2010	7/13/2012	7/13/2012	12/11/2006	NA	Member TPH	120 Long Ridge Road 3 North Stamford, CT 06902	203-388-2700	Clearing, Transact Business with the Public
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
Walleye Trading LLC	12/1/2008	11/12/2010	NA	4/17/2018	6/1/2006	7/12/2021	Member TPH	2800 Niagara Lane North Plymouth, MN 55447	952-345-6623	Proprietary Trading, Market Maker
Webull Financial LLC	NA	NA	NA	3/1/2021	NA	NA	Member TPH	44 Wall Street, Suite 501 New York, NY 10005	917-725-2408	Public Customer Business
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	4/1/2014	Member TPH	550 S Tryon Street, 6th Floor D1086-060 Charlotte, NC 28202	704-410-1913	Clearing, Proprietary Trading
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