January 11, 2022

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

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

Dear Ms. Marshall:

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 exhibits[1]:

- Exhibit C (updated to reflect list of Directors and Committee Members);
- 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 C, F, & 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

Kyle Murray
VP, Associate General Counsel
913-815-7121
Signature executed at 10:00am on 01/11/22

Enclosure

[1] See Attachment for a comprehensive list of updates to Exhibits C, F, & M

Attachment

Summary of changes made to Exhibit C:

- Deborah Koopman was removed as an Officer from Cboe Bats, LLC

Summary of changes made to Exhibit F:

- See Exhibit F cover page for additional details

Summary of changes made to Exhibit M:

- Membership Approval – Elequin Securities LLC has been approved

Based upon relief from the Commission staff and difficulties arising from COVID-19, we are making this filing without notarization. This document has been signed electronically.

Form 1 Page 1 Execution Page	**U.S. SECURITIES AND EXCHANGE COMMISSION** **WASHINGTON, D.C. 20549** **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**	Date filed (MM/DD/YY) **01/11/22**	OFFICIAL USE ONLY

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

1. State the name of the applicant: Cboe Exchange, Inc.

2. Provide the applicant's primary street address (Do not use a P.O. Box):
400 South LaSalle Street
Chicago, Illinois 60605

22000606

3. Provide the applicant's mailing address (if different):

4. Provide the business telephone and facsimile number:
(913) 815-7000 (913) 815-7119
(Telephone) (Facsimile)

5. Provide the name, title and telephone number of a contact employee:
Kyle Murray VP, Associate General Counsel, Cboe Exchange, Inc. (913) 815-7121
(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: __X__ 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: 01/11/22 Cboe Exchange, Inc.
(MM/DD/YY) (Name of Applicant)

By: Kyle Murray [signature executed at 10:00am on 01/11/22] Kyle Murray, VP, Associate General Counsel
(Signature) (Printed Name and Title)

Subscribed and sworn before me this see header day of see header, see header by see header
(Month) (Year) (Notary Public)

My Commission expires see header County of see header State of see header

This page must always be completed in full with original, manual signature and notarization.

Affix notary stamp or seal where applicable.

Exhibit C

Exhibit Request:

For each subsidiary or affiliate of the applicant, and for any entity with whom the applicant has a contractual or other agreement relating to the operation of an electronic trading system to be used to effect transactions on the exchange ("System"), provide the following information:

1. **Name and address of organization.**

2. **Form of organization (e.g., association, corporation, partnership, etc.).**

3. **Name of state and statute citation under which organized. Date of incorporation in present form.**

4. **Brief description of nature and extent of affiliation.**

5. **Brief description of business or functions. Description should include responsibilities with respect to operation of the System and/or execution, reporting, clearance, or settlement of transactions in connection with operation of the System.**

6. **A copy of the constitution.**

7. **A copy of the articles of incorporation or association including all amendments.**

8. **A copy of existing by-laws or corresponding rules or instruments.**

9. **The name and title of the present officers, governors, members of all standing committees or persons performing similar functions.**

10. **An indication of whether such business or organization ceased to be associated with the applicant during the previous year, and a brief statement of the reasons for termination of the association.**

Response: Please see below responses for the following entities:

A. Bats Global Markets Holdings, Inc.

1. *Name*: Bats Global Markets Holdings, Inc.
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on June 29, 2007.

4. *Brief description of nature and extent of affiliation*: Cboe Bats, LLC owns 100% of the membership interests of Bats Global Markets Holdings, Inc. Bats Global Markets Holdings, Inc. is the Exchange's 100% owner.

5. *Brief description of business or functions*: Bats Global Markets Holdings, Inc. is an intermediate holding company.

6. *Copy of constitution*: Not applicable.

7. Copy of articles of incorporation or association and amendments: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Jen Browning (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (Vice President and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

B. Direct Edge LLC

1. *Name*: Direct Edge LLC
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on December 31, 2014. Was converted from Direct Edge, Inc., a Delaware corporation, on December 31, 2014.

4. *Brief description of nature and extent of affiliation*: Cboe Bats, LLC owns 100% of the membership interests of Direct Edge LLC.

5. *Brief description of business or functions:* Direct Edge LLC is an intermediate holding company. Direct Edge LLC is the sole shareholder of Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc.

6. *Copy of constitution*: Not applicable.

7. Copy of articles of incorporation or association and amendments: No changes.

8. Copy of existing by-laws or corresponding rules or instruments: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

C. Cboe BZX Exchange, Inc.

1. *Name*: Cboe BZX Exchange, Inc.
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on November 1, 2007.

4. *Brief description of nature and extent of affiliation*: Cboe BZX Exchange, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.

5. *Brief description of business or functions*: Cboe BZX Exchange, Inc. operates as a registered national securities exchange pursuant to Section 6 of the Act.

6. *Copy of constitution*: Not applicable.

7. Copy of articles of incorporation or association and amendments: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

Current Directors

- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- Jill Sommers
- David Roscoe
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Jen Browning (VP, Chief Human Resources Officer)
- Kevin Carrai (VP, Market Data and Access Services)
- Brittany Carter (VP, Financial Planning and Analysis)
- Cole Chmielewski (Vice President, Operations)
- Catherine Clay (EVP, Head of Data and Access Solutions))
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Global Client Services)

- Eric Crampton (SVP, CTO)
- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, CRO)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Chris Isaacson (EVP, COO)
- Brett Johnson (VP, Software Engineering)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP, Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, International Expansion and Business Development)
- Marc Magrini (VP, Administration)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dennis O'Callahan (VP, Multi-Asset Product Development)
- Dan Overmyer (VP, Options Regulation)
- Hemang Patel (VP, Project Management)
- Arthur Reinstein (SVP & Deputy General Counsel)
- Brian Schell (EVP, CFO, & Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Allen Wilkinson (VP and Controller)
- Omarr Woodhouse (VP, Operations)
- Troy Yeazel (SVP, Operations)
- Umesh, Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive Committee
- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- David Roscoe
- Jill Sommers
- Scott Wagner

Regulatory Oversight Committee
- Scott Wagner
- Bruce Andrews
- David Roscoe
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

D. Cboe BYX Exchange, Inc.

1. *Name*: Cboe BYX Exchange, Inc.
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on July 31, 2009.

4. *Brief description of nature and extent of affiliation*: Cboe BYX Exchange, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.

5. *Brief description of business or functions*: Cboe BYX Exchange, Inc. operates as a registered national securities exchange pursuant to Section 6 of the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments:* No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Bruce Andrews
   - Kevin Murphy
   - Jill Sommers
   - David Roscoe
   - Scott Wagner

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP, Chief Compliance Officer)
   - Jen Browning (VP, Chief Human Resources Officer)
   - Kevin Carrai (VP, Market Data and Access Services)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Cole Chmielewski (Vice President, Operations)
   - Catherine Clay (EVP, Head of Data and Access Solutions))
   - Gary Compton (VP, Communications)
   - Jeff Connell (VP, Deputy Chief Regulatory Officer)
   - Brent Coonrod (VP, Software Engineering)
   - Arianne Criqui (SVP, Head of Options and Global Client Services)

- Eric Crampton (SVP, CTO)
- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, CRO)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Chris Isaacson (EVP, COO)
- Brett Johnson (VP, Software Engineering)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP, Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, International Expansion and Business Development)
- Marc Magrini (VP, Administration)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dennis O'Callahan (VP, Multi-Asset Product Development)
- Dan Overmyer (VP, Options Regulation)
- Hemang Patel (VP, Project Management)
- Arthur Reinstein (SVP & Deputy General Counsel)
- Brian Schell (EVP, CFO, & Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Allen Wilkinson (VP and Controller)
- Omarr Woodhouse (VP, Operations)
- Troy Yeazel (SVP, Operations)
- Umesh, Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive Committee
- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- David Roscoe
- Jill Sommers
- Scott Wagner

Regulatory Oversight Committee
- Scott Wagner
- Bruce Andrews
- David Roscoe
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

E. Cboe EDGA Exchange, Inc.

1. *Name*: Cboe EDGA Exchange, Inc.
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Formed in Delaware under the General Corporation Law of the State of Delaware on March 9, 2009.

4. *Brief description of nature and extent of affiliation*: Cboe EDGA Exchange, Inc. is an indirect wholly-owned subsidiary of Cboe Global Markets, Inc., the Exchange's ultimate parent.

5. *Brief description of business or functions:* Cboe EDGA Exchange, Inc. operates a registered national securities exchange pursuant to Section 6 of the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments:* No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Bruce Andrews
   - Kevin Murphy
   - Jill Sommers
   - David Roscoe
   - Scott Wagner

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP, Chief Compliance Officer)
   - Jen Browning (VP, Chief Human Resources Officer)
   - Kevin Carrai (VP, Market Data and Access Services)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Cole Chmielewski (Vice President, Operations)
   - Catherine Clay (EVP, Head of Data and Access Solutions))
   - Gary Compton (VP, Communications)
   - Jeff Connell (VP, Deputy Chief Regulatory Officer)
   - Brent Coonrod (VP, Software Engineering)
   - Arianne Criqui (SVP, Head of Options and Global Client Services)

- Eric Crampton (SVP, CTO)
- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, CRO)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Chris Isaacson (EVP, COO)
- Brett Johnson (VP, Software Engineering)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP, Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, International Expansion and Business Development)
- Marc Magrini (VP, Administration)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dennis O'Callahan (VP, Multi-Asset Product Development)
- Dan Overmyer (VP, Options Regulation)
- Hemang Patel (VP, Project Management)
- Arthur Reinstein (SVP & Deputy General Counsel)
- Brian Schell (EVP, CFO, & Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Allen Wilkinson (VP and Controller)
- Omarr Woodhouse (VP, Operations)
- Troy Yeazel (SVP, Operations)
- Umesh, Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive Committee
- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- David Roscoe
- Jill Sommers
- Scott Wagner

Regulatory Oversight Committee
- Scott Wagner
- Bruce Andrews
- David Roscoe
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

F. Cboe EDGX Exchange, Inc.

1. *Name*: Cboe EDGX Exchange, Inc.
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Formed in Delaware under the General Corporation Law of the State of Delaware on March 9, 2009.

4. *Brief description of nature and extent of affiliation*: Cboe EDGX Exchange, Inc. is an indirect wholly-owned subsidiary of Cboe Global Markets, Inc., the Exchange's ultimate parent.

5. *Brief description of business or functions:* Cboe EDGX Exchange, Inc. operates a registered national securities exchange pursuant to Section 6 of the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments:* No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Bruce Andrews
   - Kevin Murphy
   - Jill Sommers
   - David Roscoe
   - Scott Wagner

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP, Chief Compliance Officer)
   - Jen Browning (VP, Chief Human Resources Officer)
   - Kevin Carrai (VP, Market Data and Access Services)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Cole Chmielewski (Vice President, Operations)
   - Catherine Clay (EVP, Head of Data and Access Solutions))
   - Gary Compton (VP, Communications)
   - Jeff Connell (VP, Deputy Chief Regulatory Officer)
   - Brent Coonrod (VP, Software Engineering)
   - Arianne Criqui (SVP, Head of Options and Global Client Services)

- Eric Crampton (SVP, CTO)
- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, CRO)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Chris Isaacson (EVP, COO)
- Brett Johnson (VP, Software Engineering)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP, Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, International Expansion and Business Development)
- Marc Magrini (VP, Administration)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dennis O'Callahan (VP, Multi-Asset Product Development)
- Dan Overmyer (VP, Options Regulation)
- Hemang Patel (VP, Project Management)
- Arthur Reinstein (SVP & Deputy General Counsel)
- Brian Schell (EVP, CFO, & Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Allen Wilkinson (VP and Controller)
- Omarr Woodhouse (VP, Operations)
- Troy Yeazel (SVP, Operations)
- Umesh, Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive Committee
- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- David Roscoe
- Jill Sommers
- Scott Wagner

Regulatory Oversight Committee
- Scott Wagner
- Bruce Andrews
- David Roscoe
- Jill Sommers

Indemnity Committee
- Ed Tilly

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

G. Cboe C2 Exchange, Inc.

1. *Name*: Cboe C2 Exchange, Inc.
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), July 21, 2009.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe C2 Exchange, Inc. is a registered national securities exchange.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Bruce Andrews
   - Kevin Murphy
   - Jill Sommers
   - David Roscoe
   - Scott Wagner

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP, Chief Compliance Officer)
   - Jen Browning (VP, Chief Human Resources Officer)
   - Kevin Carrai (VP, Market Data and Access Services)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Cole Chmielewski (Vice President, Operations)
   - Catherine Clay (EVP, Head of Data and Access Solutions))
   - Gary Compton (VP, Communications)
   - Jeff Connell (VP, Deputy Chief Regulatory Officer)
   - Brent Coonrod (VP, Software Engineering)
   - Arianne Criqui (SVP, Head of Options and Global Client Services)

- Eric Crampton (SVP, CTO)
- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, CRO)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Chris Isaacson (EVP, COO)
- Brett Johnson (VP, Software Engineering)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP, Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, International Expansion and Business Development)
- Marc Magrini (VP, Administration)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dennis O'Callahan (VP, Multi-Asset Product Development)
- Dan Overmyer (VP, Options Regulation)
- Hemang Patel (VP, Project Management)
- Arthur Reinstein (SVP & Deputy General Counsel)
- Brian Schell (EVP, CFO, & Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Allen Wilkinson (VP and Controller)
- Omarr Woodhouse (VP, Operations)
- Troy Yeazel (SVP, Operations)
- Umesh, Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive Committee
- Ed Tilly
- Bruce Andrews
- Kevin Murphy
- David Roscoe
- Jill Sommers
- Scott Wagner

Regulatory Oversight Committee
- Scott Wagner
- Bruce Andrews
- David Roscoe
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

H. Cboe Trading, Inc.

1. *Name*: Cboe Trading, Inc.
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on June 16, 2005.

4. *Brief description of nature and extent of affiliation*: Cboe Trading, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.

5. *Brief description of business or functions*: Cboe Trading, Inc. is a broker-dealer registered as such with the Securities and Exchange Commission and a member of the Financial Industry Regulatory Authority and other self-regulatory organizations. Cboe Trading, Inc. provides routing of orders from the Exchange Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. to other securities exchanges, facilities of securities exchanges, automated trading systems, electronic communication networks or other broker-dealers.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Chris Isaacson
   - Brian Schell

   Current Officers
   - Bryan Upp (Chief Compliance Officer)
   - Troy Yeazel (President)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (Treasurer, FINOP)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

I. Omicron Acquisition Corp.

1. *Name*: Omicron Acquisition Corp.
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on February 7, 2011.

4. *Brief description of nature and extent of affiliation*: Omicron Acquisition Corp. is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Omicron Acquisition Corp. is an intermediate holding company of Cboe Worldwide Holdings Limited.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

J. Cboe FX Holdings, LLC

1. *Name*: Cboe FX Holdings, LLC
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on May 15, 2000.

4. *Brief description of nature and extent of affiliation*: Cboe FX Holdings, LLC is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe FX Holdings, LLC is an intermediate holding company of Cboe FX Markets, LLC, Cboe FX Services, LLC, and Cboe SEF, LLC.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

K. Cboe FX Markets, LLC

1. *Name*: Cboe FX Markets, LLC
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation:* Formed in New Jersey under Section 42 of the Limited Liability Company Act of the State of New Jersey on August 7, 2001.

4. *Brief description of nature and extent of affiliation*: Cboe FX Markets, LLC is wholly-owned by Cboe FX Holdings, LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe FX Markets, LLC operates an institutional spot foreign exchange market.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Chief Compliance Officer)
   - Eric Crampton (SVP, CTO)
   - John Deters (EVP, Chief Strategy Officer and Head of Multi-Asset Solutions)
   - James Enstrom (SVP, Chief Audit Executive)
   - Todd Furney (Chief Risk Officer)
   - Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
   - Jill Griebenow (SVP & Chief Accounting Officer)
   - Allen Wilkinson (VP and Controller)
   - Greg Hoogasian (SVP, Chief Regulatory Officer)
   - Chris Isaacson (EVP)
   - Stephanie Marrin Lara (Deputy Chief Regulatory Officer)
   - Andrew Lowenthal (EVP, International Expansion and Business Development)
   - Brian Schell (EVP, CFO and Treasurer)
   - J. Patrick Sexton (EVP, General Counsel, and Corporate Secretary)

- Jonathan Weinberg (Vice President, Head of FX)
- Vivian Yiu (VP, FX Chief Operating Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

L. Cboe FX Services, LLC

1. *Name*: Cboe FX Services, LLC
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation:* Formed in New Jersey under Section 42 of the Limited Liability Company Act of the State of New Jersey on November 22, 2004.

4. *Brief description of nature and extent of affiliation*: Cboe FX Services, LLC is wholly-owned by Cboe FX Holdings, LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe FX Services, LLC operates an institutional spot foreign exchange market.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Barry Calder (Head of Liquidity & Client Services)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Andrew Lowenthal (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

M. Cboe FX Europe Limited

1. *Name*: Cboe FX Europe Limited
   Address: 11 Monument Street, London, EC3R 8AF, United Kingdom

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales under the Companies Act 1985 on February 5, 2015.

4. *Brief description of nature and extent of affiliation*: Cboe FX Europe Limited is wholly-owned by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe FX Europe Limited operates an institutional spot foreign exchange market.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Dave Howson

   Current Officers
   - Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

N. Cboe FX Asia Pte. Limited

1. *Name*: Cboe FX Asia Pte. Limited
   Address: Marina Blvd. #28-00, One Marina Boulevard, Singapore (049318)

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Singapore under the Companies Act (Cap. 50) on February 23, 2015.

4. *Brief description of nature and extent of affiliation*: Cboe FX Asia Pte. Limited is wholly-owned by Cboe Worldwide Holdings Limited which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe FX Asia Pte. Limited operates an institutional spot foreign exchange market.

6. *Copy of constitution*: No changes.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Ng Lip Chih (Singapore Nominee)

   Current Officers
   - Ed Tilly (President)
   - Ang Yee Koon Daphne, Secretary (Allen & Gledhill)
   - Tan Zhe Lei, Secretary (Allen & Gledhill)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

O. Cboe Europe Limited

1. *Name*: Cboe Europe Limited
   Address: 5th Floor, The Monument Building, London, EC3R 8AF, United Kingdom

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales under the Companies Act 1985 on March 28, 2008.

4. *Brief description of nature and extent of affiliation*: Cboe Europe Limited is wholly-owned by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe Europe Limited is recognized as a Recognized Investment Exchange in the United Kingdom under the Financial Services and Markets Act 2000 ("FSMA"). It operates a platform for trading of European equity securities.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Richard Balarkas
   - Eleanor Beasley
   - Angelo Evangelou
   - Rebecca Fuller
   - Ted Hood
   - Dave Howson (Executive Director)
   - Catherine Langlais
   - David Lawton
   - Irina Sonich-Bright
   - Natan Tiefenbrun
   - Kristian West

   Current Officers
   - Dave Howson (Chief Executive Officer)
   - Antonio Amelia (Secretary)
   - Jerry Avenell (Co-Head Sales)

- Alex Dalley (Co-Head Sales)
- Nick Dutton (Chief Regulatory Officer)
- Tim Lipscomb (Chief Operations Officer)
- Stephanie Renner (CFO)
- Karl Spielmann (Chief Legal Officer)
- Natan Tiefenbrun (Head of Equities)

Standing Committees

Audit, Risk and Compliance Committee

- Richard Balarkas
- Ted Hood
- Catherine Langlais
- David Lawton

Remuneration Committee

- Rebecca Fuller
- Ted Hood
- Kristian West

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

P. Cboe Chi-X Europe Limited

1. *Name*: Cboe Chi-X Europe Limited
   Address: 5th Floor, The Monument Building, London, EC3R 8AF, United Kingdom

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales.

4. *Brief description of nature and extent of affiliation*: Cboe Chi-X Europe Limited is wholly-owned by Cboe Europe Limited which, in turn, is indirectly wholly owned by Bats Global Markets, Inc.

5. *Brief description of business or functions*: Cboe Chi-X Europe Limited is authorized in the United Kingdom under the Financial Services and Markets Act 2000 ("FSMA"), as an investment firm. Between April 30, 2012 and May 20, 2013 it was a dormant company. Since May 20, 2013, Cboe Chi-X Europe Limited operates the smart order router that is needed for the routing strategies deployed by Cboe Europe Limited. As of November 2018 this company remains dormant.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Dave Howson

   Current Officers
   - Dave Howson (Chief Executive Officer)
   - Antonio Amelia (Secretary)
   - Stephanie Renner (Chief Financial Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

Q. Cboe SEF, LLC

1. *Name*: Cboe SEF, LLC
   Address: 17 State Street, 31st Floor, New York, NY 10004

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on April 19, 2012.

4. *Brief description of nature and extent of affiliation*: Cboe SEF, LLC is wholly-owned by Cboe FX Holdings LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe SEF, LLC is a swap execution facility registered with the Commodity Futures Trading Association, which will soon list non-deliverable foreign exchange forwards for trading.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Senior Vice President and Chief Compliance Officer)
   - Jennifer Browning (Vice President, Chief Human Resources Officer)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Gary Compton (Vice President, Communications)
   - Eric Crampton (SVP, CTO)
   - John Deters (EVP, Chief Strategy Officer)
   - James Enstrom (Senior Vice President & Chief Audit Executive)
   - Angelo Evangelou (SVP, Chief Policy Officer)
   - Stacie Fleming (SVP, Marketing and Communications)
   - Todd Furney (VP, and Chief Risk Officer)
   - Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
   - Jill Griebenow (SVP & Chief Accounting Officer)
   - Gregory Hoogasian (Senior Vice President & Chief Regulatory Officer)
   - Dave Howson (EVP & President, Cboe Europe and Asia Pacific)
   - Chris Isaacson (Executive Vice President & COO)
   - Andrew Lowenthal (Senior Vice President, International Expansion and Business Development)

- Stephanie Marrin Lara (Vice President and Deputy Chief Regulatory Officer)
- Emily Mitchell (Vice President, Tax)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Brian Schell (Executive Vice President, Chief Financial Officer & Treasurer)
- Jon Weinberg (Vice President, Head of FX)
- Allen Wilkinson (VP and Controller)
- Umesh Yerram (VP, Chief Information Security Officer)
- Vivian Yiu (Vice President, FX Chief Operating Officer)

Current Directors

- Chris Isaacson (Chairman of the Board)
- Gilbert Bassett, Jr.
- Michael Gorham
- James Parisi
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

R. Cboe Worldwide Holdings Limited

1. *Name*: Cboe Worldwide Holdings Limited
   Address: 11 Monument Street, London, EC3R 8AF, United Kingdom

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales under the Companies Act 2006 on November 9, 2016.

4. *Brief description of nature and extent of affiliation*: Cboe Worldwide Holdings Limited is wholly-owned by Omicron Acquisition Corp., which is an affiliate of the Exchange.

5. *Brief description of business or functions*: Cboe Worldwide Holdings Limited is an intermediate holding company of Cboe Europe Limited, Cboe Hong Kong Limited, Cboe UK Limited, Cboe FX Asia Pte. Limited, and IndexPubs S.A.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Dave Howson

   Current Officers
   - Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

S. Cboe Global Markets, Inc.

1. *Name*: Cboe Global Markets, Inc.
   Address: 433 W. Van Buren St., Chicago, Illinois 60607

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. §101, et seq), August 15, 2006.

4. *Brief description of nature and extent of affiliation*: Cboe Bats, LLC is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Holding company.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments:* No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - William Farrow
   - Edward Fitzpatrick
   - Ivan Fong
   - Janet Froetscher
   - Jill Goodman
   - Alexander Matturi
   - Jennifer McPeek
   - Roderick Palmore
   - James Parisi
   - Joe Ratterman
   - Michael Richter
   - Jill Sommers
   - Eugene Sunshine
   - Fredric Tomczyk

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Catherine Clay (EVP, Head of Data and Access Solutions)
   - Eric Crampton (EVP, Chief Technical Officer)
   - John Deters (EVP, Chief Strategy Officer)

- Jill Griebenow (SVP & Chief Accounting Officer)
- Dave Howson (EVP, President Europe and Asia Pacific)
- Chris Isaacson (EVP and COO)
- Brian Schell (EVP, and CFO)
- J. Patrick Sexton (EVP, General Counsel and Corporate Secretary)

Compensation Committee
- Janet Froetscher
- Edward Fitzpatrick
- James Parisi
- Fredric Tomczyk

Audit Committee
- William Farrow
- Jennifer McPeek
- Michael Richter
- James Parisi
- Alexander Matturri

Nominating and Governance Committee
-
- Jill Goodman
- Roderick Palmore
- Jill Sommers
- Eugene Sunshine
- Janet Froetscher

Finance and Strategy Committee
- Jill Goodman
- Joe Ratterman
- Roderick Palmore
- Fredric Tomzcyk

Risk Committee
- William Farrow
- Edward Fitzpatrick
- Janet Froetscher
- Michael Richter
- Ivan Fong

Indemnity Committee
- Ed Tilly

ATS Oversight Committee

- Jennifer McPeek
- Jamie Parisi
- Joseph Ratterman

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

T. Cboe Futures Exchange, LLC

1. *Name*: Cboe Futures Exchange, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), July 16, 2002.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe Futures Exchanges, LLC is a designated contract market (DCM) approved by the Commodity Futures Trading Commission in August 2003. Cboe Futures Exchange, LLC is a fully electronic futures exchange.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Gilbert Bassett, Jr.
   - Michael Gorham
   - James Parisi
   - Jill Sommers

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP and Chief Compliance Officer)
   - Jennifer Browning (VP, Chief Human Resources Officer)
   - Kevin Carrai (Vice President, Market Data and Access Services)
   - Brittany Carter (VP, Financial Planning and Analysis)
   - Cole Chmielewski (Vice President, Operations)
   - Catherine Clay (EVP, Head of Data and Access Solutions))
   - Gary Compton (VP, Corporate Communications)
   - Eric Crampton (SVP, CTO)
   - Arianne Criqui (SVP, Head of Options and Global Client Services)
   - John Deters (Executive Vice President, Chief Strategy Officer)
   - James Enstrom (Senior Vice President & Chief Audit Executive)

- Angelo Evangelou (SVP, Chief Policy Officer)
- Stacie Fleming (SVP, Marketing and Communications)
- Todd Furney (Vice President and Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel & Chief Litigation Officer)
- Jill Griebenow (Senior Vice President & Chief Accounting Officer)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (Senior Vice President & Chief Regulatory Officer)
- Dave Howson (EVP and President, Cboe Europe and Asia Pacific)
- Chris Isaacson (Executive Vice President, COO)
- Jennifer Lamie (VP & Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP & Deputy Chief Reg Officer)
- Andrew Lowenthal (Executive Vice President, International Expansion, Business Development)
- Michael Mollet (VP, Head of Futures)
- Emily Mitchell (Vice President, Tax)
- Arthur Reinstein (Senior Vice President, Deputy General Counsel)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Brian Schell (Executive Vice President, Chief Financial Officer & Treasurer)
- Allen Wilkinson (Vice President and Controller)
- Troy Yeazel (Senior Vice President, Operations)
- Umesh Yerram (VP, Chief Information Security Officer)

Standing Committees

Executive
- Ed Tilly
- Michael Gorham

Regulatory Oversight Committee
- Michael Gorham
- Gilbert Bassett
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

U. Cboe Building Corporation

1. *Name*: Cboe Building Corporation
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), August 8, 1980.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Owns facility used by Cboe Global Markets, Inc.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Jill Griebenow (Vice President
   - Chris Isaacson (Vice President)
   - Marc Magrini (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

V. Cboe, LLC

1. *Name*: Cboe, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), August 22, 2001.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe, LLC is a limited liability company member of OneChicago, LLC.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Catherine Clay (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

W. Cboe III, LLC

1. *Name*: Cboe III, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), May 2, 2014.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Holding company for investment in Tradelegs, LLC.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - John Deters
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - John Deters (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

X. Cboe Bats, LLC

1. *Name*: Cboe Bats, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), September 25, 2016.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions*: Holding company.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell
   - Chris Isaacson

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (SVP, Chief Compliance Officer)
   - Jen Browning (VP, Head of Human Resources)
   - Kevin Carrai (VP, Market Data and Access Services)
   - Cole Chmielewski (VP, Operations)
   - Bo Chung (SVP, Global Sales and Index Licensing)
   - Catherine Clay (EVP, Head of Data and Access Solutions)
   - Gary Compton (VP, Corporate Communications)
   - Jeff Connell (VP, Deputy Chief Regulatory Officer)
   - Brent Coonrod (Vice President, Software Engineering)
   - Eric Crampton (SVP, CTO)
   - Arianne Criqui (SVP, Head of Options and Business Development)
   - Gina DeRaimo (VP, Cboe Derivatives Institute)
   - John Deters (EVP, Chief Strategy Officer)
   - Laura Dickman (VP, Associate General Counsel)
   - Geralyn Endo (VP, Global DnA Client Engagement)

- James Enstrom (SVP, Chief Audit Executive)
- Angelo Evangelou (SVP, Market Policy and Government Affairs)
- Stacie Fleming (SVP, Marketing and Communications)
- Carmen Frazier Brannan (VP, Government Relations)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebenow (SVP & Chief Accounting Officer)
- Gerald Hanweck (Vice President, Technology)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Michael Hollingsworth (VP, Global Head of Data and Analytics)
- Gregory Hoogasian (SVP, Chief Regulatory Officer)
- David Howson (EVP and President, Europe and Asia Pacific)
- Chris Isaacson (EVP, Chief Operating Officer)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Michael Izhaky (Vice President, Head of Capital Efficiencies)
- Brett Johnson (VP, Software Engineering)
- Adam Kreis (VP, Associate General Counsel)
- Vivek Kumar (Deputy Chief Information Security Officer)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Andrew Lowenthal (SVP, Global Expansion & Business Development, Global Strategy))
- Marc Magrini (VP, Administration)
- Stephanie Marrin Lara (VP, Deputy Chief Regulatory Officer)
- Emily Mitchell (Vice President, Tax)
- Michael Mollet (VP, Head of Futures)
- Anthony Montesano (VP, Derivatives, Head of Market Structure)
- Laura Morrison (SVP, Global Head of Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulations)
- Arthur Reinstein (SVP, Deputy General Counsel)
- Brian Schell (EVP, Chief Financial Officer and Treasurer)
- Curt Schumacher (VP, Infrastructure)
- J. Patrick Sexton (EVP, General Counsel and Corporate Secretary)
- Steven Sinclair (VP, Software Engineering)
- Eileen Smith (VP, Data and Analytics)
- Natan Tiefenbrun (Head of Equities)
- Jonathan Weinberg (Vice President, Head of FX)
- Allen Wilkinson (Vice President and Controller)
- Troy Yeazel (SVP, Operations)
- Umesh Yerram (VP, Chief Information Security Officer)
- Vivian Yiu (VP, FX Chief Operating Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

Y. Cboe Livevol, LLC

1. *Name*: Cboe Livevol, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), May 29, 2015.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe Livevol, LLC provides equity and index options technology for professional and retail traders, which includes options strategy backtesting, trade analysis and volatility modeling technologies and historical data.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Andrew Lowenthal
   - John Deters
   - Catherine Clay

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Chief Compliance Officer)
   - Brent Coonrod (Vice President)
   - Catherine Clay (Vice President)
   - Eric Crampton (Vice President)
   - John Deters (Vice President)
   - James Enstrom (Vice President, Chief Audit Executive)
   - Todd Furney (Chief Risk Officer)
   - Jennifer Golding (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Andrew Lowenthal (Vice President)
   - Emily Mitchell (Vice President)

- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

Z. Cboe UK Limited

1. *Name*: Cboe UK Limited
   Address: 5th Floor, The Monument Building, London, EC3R 8AF, United Kingdom

2. *Form of organization*: Private Limited Company.

3. *Name of state, statute under which organized and date of incorporation*: England and Wales, Companies Act 2006, March 10, 2016.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Marketing and business development services.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Dave Howson

   Current Officers
   - None

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

AA. Cboe Vest, LLC

1. *Name*: Cboe Vest, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), December 10, 2015.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Holding company of majority equity investment in Eris Inc.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - John Deters
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Catherine Clay (Vice President)
   - John Deters (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

BB. Loan Markets, LLC

1. *Name*: Loan Markets, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), May 11, 2015.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Holding company for investment in American Financial Exchange, LLC.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - John Deters
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - John Deters (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Andrew Lowenthal (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

CC. Cboe Data Services, LLC

1. *Name*: Cboe Data Services, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), February 21, 2006.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe Data Services, LLC sells market data.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Chief Compliance Officer)
   - Kevin Carrai (Vice President)
   - Catherine Clay (Vice President)
   - Eric Crampton (Vice President)
   - James Enstrom (Chief Audit Executive)
   - Todd Furney (Chief Risk Officer)
   - Jennifer Golding (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Andrew Lowenthal (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

DD. Signal Trading Systems, LLC

1. *Name*: Signal Trading Systems, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), May 13, 2010.

4. *Brief description of nature and extent of affiliation*: Fifty percent (50%) subsidiary of Cboe Exchange, Inc.

5. *Brief description of business or functions:* Signal Trading Systems, LLC developed and markets a multi-asset front-end order entry system known as "Pulse".

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: Not applicable

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*: None

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

EE. Cboe Vest Group, Inc.

1. *Name*: Cboe Vest Group, Inc.
   Address: 8300 Greensboro Drive, 8th Floor, McLean, VA 22102

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware General Corporation Law (8 Del. C. §101, et seq), January 2, 2015.

4. *Brief description of nature and extent of affiliation*: Majority-owned subsidiary of Cboe Vest, LLC.

5. *Brief description of business or functions:* Through its subsidiaries, provides options-based investment advisory services.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: No changes.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - John Deters
   - Catherine Clay

   Current Officers
   - Jeffrey Chang (Chief Financial Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable

FF. Cboe Hong Kong Limited

1. *Name*: Cboe Hong Kong Limited
   Address: 6th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong

2. *Form of organization*: Private Company Limited by Shares.

3. *Name of state, statute under which organized and date of incorporation*: Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), May 29, 2017.

4. *Brief description of nature and extent of affiliation*: Cboe Hong Kong Limited is wholly-owned by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions:* Marketing and business development services (business expected to commence in September 2017).

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Andy Lowenthal

   Current Officers
   - Consec Services Limited (Company Secretary)
   - Arianne Criqui (Vice President)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

GG. Cboe Silexx, LLC

1. *Name*: Cboe Silexx, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), October 16, 2017.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Cboe Silexx, LLC operates the Silexx order execution management system business.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - John Deters
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Chief Compliance Officer)
   - Catherine Clay (Vice President)
   - Brent Coonrod (Vice President)
   - Eric Crampton (Vice President)
   - John Deters (Vice President)
   - James Enstrom (Chief Audit Executive)
   - Todd Furney (Chief Risk Officer)
   - Jennifer Golding (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)

- J. Patrick Sexton (Secretary)
- Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

HH. Digital Asset Benchmark Administration, LLC

1. *Name*: Digital Asset Benchmark Administration, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), October 17, 2017.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* Digital Asset Benchmark Administration, LLC licenses Gemini-related data.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - John Deters
   - Brian Schell

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Chief Compliance Officer)
   - Catherine Clay (Vice President)
   - Eric Crampton (Vice President)
   - John Deters (Vice President)
   - James Enstrom (Chief Audit Executive)
   - Todd Furney (Chief Risk Officer)
   - Jennifer Golding (Vice President))
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

II. CBOE Europe B.V.

1. *Name*: CBOE Europe B.V.
   Address: 1212 Gustav Mahlerlaan, 108La Amsterdam (Netherlands)

2. *Form of organization*: Besloten Vennootschap (comparable with Private Company Limited)

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in the United Kingdom on August 1, 2018.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Europe Limited. Cboe Europe Limited is wholly-owned by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions:* The business is very broad, encompassing the operation of a regulated market and an approved publication arrangement, and all other businesses that may be ancillary or useful for the above operations

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ade Cordell
   - Ruben Hilhorst
   - Dave Howson
   - Jenny Trahant

   Current Officers
   - Ade Cordell
   - Ruben Hilhorst (Head of Compliance)
   - Jenny Trahant (Director, Trade Desk)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

JJ. Cboe Off-Exchange Services, LLC

1. *Name*: Cboe Off-Exchange Services, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq), January 31, 2019.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited liability companies may be organized under the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - John Deters (Vice President)
   - Jill Griebenow (Vice President)
   - Chis Isaacson (Vice President)
   - Andrew Lowenthal (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

KK. Cboe Global Indices, LLC

1. *Name*: Cboe Global Indices, LLC
   Address: 400 South LaSalle Street, Chicago, Illinois 60605

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Illinois, Illinois Limited Liability Company Act, September 11, 2019.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited liability companies may be organized under the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell
   - Catherine Clay

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Alexandra Albright (Vice President and Chief Compliance Officer)
   - Catherine Clay (Vice President)
   - Eric Crampton (Vice President)
   - James Enstrom (Vice President and Chief Audit Executive)
   - Todd Furney (Vice President and Chief Risk Officer)
   - Jennifer Golding (Vice President and Chief Litigation Officer)
   - Jill Griebenow (Vice President)
   - Rob Hocking (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

LL. Cboe Switzerland GmbH

1. *Name*: Cboe Switzerland GmbH
   Address: c/o Format A AG
   Pfingstweidstrasse 102b 8005 Zurich

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Switzerland under Article 777c and Article 633, November 18, 2019.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Worldwide Holdings Limited.

5. *Brief description of business or functions:* Operate an electronic trading platform for financial contracts and instruments as well as to provide services in this business are to Group affiliate.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Managers
   - Roman Sturzenegger
   - Jonathan Weinberg

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

MM. Hanweck Associates, LLC

1. *Name*: Hanweck Associates, LLC
   Address: 30 Broad Street, Floor 42, New York, NY 10004

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under provisions of the New York State Limited Liability Company Law on November 25, 2003.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary acquired by Cboe Global Markets, Inc. on February 3, 2020.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited liability companies may be organized under the Act.

6. *Copy of constitution*: No changes.

7. *Copy of articles of incorporation or association and amendments*: Not applicable.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Managers
   - Ed Tilly
   - Chris Isaacson
   - Brian Schell

   Current Officers
   - Ed Tilly (President and CEO)
   - Alexandra Albright (Vice President and Chief Compliance Officer)
   - Catherin Clay (Vice President)
   - Eric Crampton (Vice President)
   - John Deters (Vice President)
   - Jim Enstrom (Vice President and Chief Audit Executive)
   - Todd Furney (Vice President and Chief Risk Officer)
   - Jennifer Golding (Vice President and Chief Litigation Officer)
   - Jill Griebenow (Vice President)
   - Gerald Hanweck (Vice President)
   - Rob Hocking (Vice President)
   - Chris Isaacson (Chief Operating Officer)
   - Emily Mitchell (Vice President)

- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

NN. Hanweck Associates Pte. Ltd.

1. *Name*: Hanweck Associates Pte. Ltd.
   Address: 1 Marina Bouleard #28-00, One Marina Boulevard, Singapore, 018989, Singapore

2. *Form of organization*: Private Company Limited by Shares

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under the Companies Act (Cap. 50) in Singapore on May 30, 2019.

4. *Brief description of nature and extent of affiliation*: Hanweck Associates Pte. Ltd. is a subsidiary of Hanweck Associates, LLC, which is wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: No changes.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ng Lip Chih
   - Ed Tilly

   Current Officers
   - Ang Yee Koon Daphne
   - Tan Zhe Lei

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

OO. Hanweck Associates Limited

1. *Name*: Hanweck Associates Limited
   Address: 42-46 Fountain Street
   Belfast, Northern Ireland, United Kingdom BT1 5EF

2. *Form of organization*: Private Company Limited by Shares

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under the Companies Act of 2006 on May 20, 2015.

4. *Brief description of nature and extent of affiliation*: Hanweck Associates Limited is a subsidiary of Hanweck Associates, LLC, which is wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Dave Howson

   Current Officer
   - Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

PP. Cboe Europe Indices B.V.

1. *Name*: Cboe Europe Indices B.V.
   Address: 1212 Gustav Mahlerlaan, 1081LA Amsterdam, Netherlands

2. *Form of organization*: Besloten Vennootschap (comparable with Private Limited Liability Company)

3. *Name of state, statute under which organized and date of incorporation*: Incorporated per Amsterdam statutes on December, 16 2019.

4. *Brief description of nature and extent of affiliation*: Cboe Europe Indices B.V. is a subsidiary of Cboe Worldwide Holdings Limited.

5. *Brief description of business or functions:* The Company's primary function is to provide services as a benchmark administrator.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ade Cordell
   - Joe Green
   - Ruben Hilhorst
   - Dave Howson (Chairman)

   Current Officer
   - Ade Cordell
   - Joe Green
   - Ruben Hilhorst

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

QQ. Cboe Canada Holdings, ULC

1. *Name*: Cboe Canada Holdings, ULC
   Address: Suite 2600, Three Bentall Centre
   595 Burrard Street, Vancouver BC V7X 1L3 Canada

2. *Form of organization*: Unlimited Liability Corporation

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under the Business Corporation Act on April 22, 2020.

4. *Brief description of nature and extent of affiliation*: Hanweck Associates Limited is a subsidiary of Omicron Acquisition Corp., which is wholly-owned subsidiary of Bats Global Markets Holdings.

5. *Brief description of business or functions:* Cboe Canada Holdings, ULC is an intermediate holding company.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Brian Schell

   Current Officer
   - Ed Tilly (President and CEO)
   - John Deters (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)
   - Allen Wilkinson (VP and Controller)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

RR. European Central Counterparty N.V.

1. *Name*: European Central Counterparty N.V. (aka EuroCCP)
   Address: Strawinskylaan 1847, Tower I, Level 3
   1077 XX Amsterdam, Netherlands

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated per Amsterdam statutes on February 28th, 2007.

4. *Brief description of nature and extent of affiliation*: European Central Counterparty N.V. was acquired by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions:* The European Central Counterparty N.V. was formed to provide equities clearing and settlement services throughout Europe

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Supervisory Board
   - John Deters
   - Dave Howson (Chairman)
   - Stephanie Renner
   - Clotilde Bouchet (Independent)
   - Peter Bezemer (Independent)

   Management Board
   - Cecile Nagel
   - Arnoud Siegmann

   Current Officer
   - Cecile Nagel (CEO)
   - Arnoud Siegmann (Chief Risk Officer)
   - Tom Zydenbos (Chief Financial Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

SS. TriAct Canada Marketplace LP

1. *Name*: TriAct Canada Marketplace LP
   Address: 130 King Street West, Suite 1050
   Toronto, Ontario Canada

2. *Form of organization*: Limited Partnership

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under the Nova Scotia Companies Act on January 31, 2005.

4. *Brief description of nature and extent of affiliation*: TriAct Canada Marketplace LP is owned by Cboe Canada Holdings, ULC, a subsidiary of Omicron Acquisition Corp., which is wholly-owned subsidiary of Bats Global Markets Holdings.

5. *Brief description of business or functions:* The TriAct Canada Marketplace LP serves as an operational alternative trading system.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - None

   Current Officers
   - Bryan Christopher Blake (CEO)
   - Gregory Leonard Davies (CFO)
   - David Nolan (CCO)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

TT. MATCHNow GP ULC

1. *Name:* MATCHNow GP ULC (f/k/a TCM Corp.)
   Address: 4222 Bay Street Toronto Ontario, Vancouver, B.C., Canada

2. Form of organization: Unlimited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated under the British Columbia Business Corporations Act on November 4, 2020

4. *Brief description of nature and extent of affiliation*: MATCHNow GP ULC (f/k/a TCM Corp.) is owned by Cboe Canada Holdings, ULC, a subsidiary of Omicron Acquisition Corp., which is wholly-owned subsidiary of Bats Global Markets Holdings.

5. *Brief description of business or functions:* MATCHNow GP ULC (f/k/a TCM Corp.) helps support an operational alternative trading system.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Bryan Christopher Blake

   Current Officers
   - Bryan Christopher Blake (CEO)
   - Gregory Leonard Davies (CFO)
   - David Nolan (CCO)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

UU. Cboe Netherlands Services Company B.V

1. *Name*: Cboe Netherlands Services Company B.V.
   Address: 1212 Gustav Mahlerlaan, 108La Amsterdam (Netherlands)

2. *Form of organization*: Besloten Vennootschap (comparable with Private Limited Liability Company)

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered with the Dutch Chamber of Commerce on October 12, 2020.

4. *Brief description of nature and extent of affiliation*: Cboe Netherlands Services Company B.V. is a subsidiary of Cboe Worldwide Holdings Limited.

5. *Brief description of business or functions:* Cboe Netherlands Services Company B.V. business is broad; providing technical support, operational support, managerial services, and other businesses that may be ancillary or useful for the above operations.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ruben Hilhorst
   - Dave Howson

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

VV. BIDS Holdings GP LLC

1. *Name*: BIDS Holdings GP LLC
   Address: 1 Liberty Plaza, 165 Broadway, 23rd Floor, New York, NY 10006

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered in the state of Delaware on June 14, 2006.

4. *Brief description of nature and extent of affiliation*: BIDS Holdings GP LLC is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited liability companies may be organized under the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

WW. BIDS Holdings LP

1. *Name*: BIDS Holdings LP
   Address: 1 Liberty Plaza, 165 Broadway, 23rd Floor, New York, NY 10006

2. *Form of organization*: Limited Partnership

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered in the state of Delaware on June 14, 2006.

4. *Brief description of nature and extent of affiliation*: BIDS Holdings LP is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited partnership may be organized under the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

XX. BIDS Trading, LP

1. *Name*: BIDS Trading, LP
   Address: 1 Liberty Plaza, 165 Broadway, 23rd Floor, New York, NY 10006

2. *Form of organization*: Limited Partnership

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered in the state of Delaware on June 14, 2006.

4. *Brief description of nature and extent of affiliation*: BIDS Trading, LP is a subsidiary of BIDS Holdings LP, which is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized to develop a securities trading platform and other products that will enhance the range of services available to the limited partners of the Limited Partner and their respective clients and enhance efficiencies for and reduce the costs of such services.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

YY. BIDS Global Services, LLC

1. *Name*: BIDS Global Services, LLC
   Address: 1 Liberty Plaza, 165 Broadway, 23rd Floor, New York, NY 10006

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered in the state of Delaware on September 20, 2016.

4. *Brief description of nature and extent of affiliation*: BIDS Global Services, LLC is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which limited liability companies may be organized under the Act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

ZZ. BIDS Trading Technologies, Ltd.

1. *Name*: BIDS Trading Technologies, Ltd.
   Address: 101 Park Avenue, New York, NY 10178

2. *Form of organization*: Private Company Limited by Shares

3. *Name of state, statute under which organized and date of incorporation*: Incorporated and registered under the Business Corporations Act in British Columbia Canada on September 2, 2009.

4. *Brief description of nature and extent of affiliation*: BIDS Trading Technologies, Ltd. is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers
   - Sik Ngai (President & Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

AAA. BIDS Trading Limited

1. *Name*: BIDS Trading Limited
   Address: St. James's Square, Suite 1, 3rd Floor 11-12, London, SW1Y 4LB, United Kingdom

2. *Form of organization*: Private Company Limited by Shares

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales under the Companies Act 2006 on May 12, 2015.

4. *Brief description of nature and extent of affiliation*: BIDS Trading Limited is a wholly-owned subsidiary of Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Simon Monson

   Current Officers
   - Jordan Trust Company (Company Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

BBB. Cboe Data and Access Solutions China, LLC

1. *Name*: Cboe Data and Access Solutions China, LLC
   Address: 1209 Orange Street, Wilmington, Delaware 19801

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on May 25, 2021.

4. *Brief description of nature and extent of affiliation*: Cboe Data Services was formed as a subsidiary of Cboe Data Services, LLC.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Kevin Carrai (Vice President)
   - Catherin Clay (Vice President)
   - Jill Griebenow (Vice President)
   - Chris Isaacson (Vice President)
   - Emily Mitchell (Vice President)
   - Brian Schell (Treasurer)
   - J. Patrick Sexton (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

CCC. Cboe Fixed Income Markets, LLC

1. *Name*: Cboe Fixed Income Markets, LLC
   Address: 1209 Orange Street, Wilmington, Delaware 19801

2. *Form of organization*: Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on May 25, 2021.

4. *Brief description of nature and extent of affiliation*: Cboe Data Services was formed as a subsidiary of Bats Global Markets Holdings, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No changes.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors

   Current Officers
   - Jonathan Weinberg (President)
   - J. Patrick Sexton (Secretary)
   - Vivian You (Vice President)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

DDD. Chi-X Holdings Limited

1. *Name*: Chi-X Holdings Limited
   Address: 5705, 57th Floor, The Center, 99 Queen's Road Central, Hong Kong

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong) on February 17, 2016.

4. *Brief description of nature and extent of affiliation*: Chi-X Holdings Limited was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson (Chair)
   - Christopher Andrew Isaacson
   - John Frederick Deters

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

EEE. Chi-X Asia Pacific Holdings Limited

1. *Name*: Chi-X Asia Pacific Holdings Limited
   Address: 5705, 57th Floor, The Center, 99 Queen's Road Central, Hong Kong

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong) on January 13, 2016.

4. *Brief description of nature and extent of affiliation*: Chi-X Asia Pacific Holdings Limited was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson (Chair & CEO)
   - Christopher Andrew Isaacson
   - John Frederick Deters

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

FFF. Chi-X Global Technology (Hong Kong) Limited

1. *Name*: Chi-X Global Technology (Hong Kong) Limited
   Address: 5705, 57th Floor, The Center, 99 Queen's Road Central, Hong Kong

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong) on September 14, 2016.

4. *Brief description of nature and extent of affiliation*: Chi-X Global Technology (Hong Kong) Limited was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Christopher Andrew Isaacson
   - John Frederick Deters

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

GGG. Chi-X Australia Pty Ltd

1. *Name*: Chi-X Australia Pty Ltd
   Address: Governor Phillip Tower, Level 23, 1 Farrer Place, Sydney, NSW 2000

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in New South Wales under the Corporations Act 2001on February 7, 2008.

4. *Brief description of nature and extent of affiliation*: Chi-X Australia Pty Ltd was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson
   - Christopher Andrew Isaacson
   - John Frederick Deters
   - David Morgan (JCF)
   - David Trude (independent)
   - Vic Jokovic (CXA CEO)

   Current Officers
   - Michael Somes, Company Secretary

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

HHH. Middlebury Holdings Pty Ltd

1. *Name*: Middlebury holdings Pty Ltd
   Address: Governor Phillip Tower, Level 23, 1 Farrer Place, Sydney, NSW 2000

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Victoria under the Corporations Act 2001 on January 27, 2016.

4. *Brief description of nature and extent of affiliation*: Middlebury Holdings Pty Ltd was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson
   - Christopher Andrew Isaacson
   - John Frederick Deters
   - David Morgan (JCF)
   - David Trude (independent)
   - Vic Jokovic (CXA CEO)

   Current Officers
   - Michael Somes, Company Secretary

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

III. Chi-X Japan Limited

1. *Name*: Chi-X Japan Limited
   Address: Shin-Toyo Akasaka Building 4-9-25 Minato-ku, Tokyo, Japan 107-0052

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Japan on March 17, 2009.

4. *Brief description of nature and extent of affiliation*: Chi-X Japan Limited was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson
   - Christopher Andrew Isaacson
   - John Frederick Deters
   - Thierry Porté (JCF)
   - Takatoshi Ito (Independent)
   - Amy Nashida (Independent)
   - Toru Irokawa (CXJ CEO / Representative Director)
   - Thomas Whitson (Statutory Auditor)

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

JJJ. Chi-X Japan Services Limited

1. *Name*: Chi-X Japan Services Limited
   Address: Shin-Toyo Akasaka Building 4-9-25 Minato-ku, Tokyo, Japan 107-0052

2. *Form of organization*: Limited Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Japan on March 17, 2009.

4. *Brief description of nature and extent of affiliation*: Chi-x Japan Services Limited was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity for which private companies may be organized under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - David Howson
   - Toru Irokawa (CXJ CEO / Representative Director)

   Current Officers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

KKK. Chi-X Global Technology (Philippines) Inc.

1. *Name*: Chi-X Global Technology (Philippines) Inc.
   Address: 10th Floor Unit AB, North Tower, Rockwell Business Center Sheridan Sheridan Street Corner United Street, Highway Hills, Manadaluyong City

2. *Form of organization*: Corporation

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Philippines under Corporation Code of the Philippines and Foreign Investments Act of 1991 on May 1, 1980.

4. *Brief description of nature and extent of affiliation*: Chi-X Global Technology (Philippines) Inc. was acquired by Cboe Global Markets, Inc.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Eric Crampton (Chair)
   - Troy Yeazel
   - Timothy Lipscomb
   - Mario Domingo (President / CTO)
   - Maria Aldeguer (CAO)

   Current Officers
   - Elaine Reyes-Rodolfo, Company Secretary
   - Francis Nacpil, Treasurer

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

LLL. Cboe Digital Holdings, Inc.

1. *Name*: Cboe Digital Holdings, Inc.
   Address: 1209 Orange Street, Wilmington, County of New Castle, DE 19801

2. *Form of organization*: Corporation

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on September 16, 2021.

4. *Brief description of nature and extent of affiliation*: : Cboe Digital Holdings, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.

5. *Brief description of business or functions:* The Company is organized for the purpose of engaging in any lawful activity under the act.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: No change.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*:

   Current Directors
   - Ed Tilly
   - Chris Isaacson

   Current Officers
   - Ed Tilly (President and Chief Executive Officer)
   - Chris Isaacson (Vice President)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: Not applicable.

MMM. Cboe ETF.com, Inc.

1. *Name*: Cboe ETF.com, Inc.
   Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214

2. *Form of organization*: Corporation.

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on March 28, 2016.

4. *Brief description of nature and extent of affiliation*: Cboe ETF.com, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.

5. *Brief description of business or functions*: Cboe ETF.com, Inc. is a media company providing ETF data, news and analysis.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: Not applicable

8. *Copy of existing by-laws*: Not applicable

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*: None

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: As of February 5, 2021 Cboe ETF.com, Inc. is no longer associated with the Exchange.

NNN. IndexPubs S.A.

1. *Name*: IndexPubs S.A.
   Address: Almagro Plaza, Ste. 508, Pedro Ponce Carrasco, E8-06 y Diego de Almagro, 170516 – Quito, Ecuador

2. *Form of organization*: Corporation (Soceidad Anonima or S.A.).

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in Ecuador on January 15, 2008.

4. *Brief description of nature and extent of affiliation*: IndexPubs S.A. is owned 0.1% by Fernando Rivera and 99.9% by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.

5. *Brief description of business or functions*: IndexPubs S.A. is a media company providing ETF data, news and analysis.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: Not applicable.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*: None

Indication of whether such business or organization ceased to be associated with the applicant during previous year: As of February 5, 2021 Cboe ETF.com, Inc. is no longer associated with the Exchange.

OOO. Cboe Europe Indices Limited

1. *Name*: Cboe Europe Indices Limited
   Address: 5th Floor, The Monument Building
   11 Monument Street, London EC3R 8AF, United Kingdom

2. *Form of organization*: Private Limited Liability Company

3. *Name of state, statute under which organized and date of incorporation*: Incorporated in England and Wales under the Companies Act 1985 on July 17, 2019.

4. *Brief description of nature and extent of affiliation*: Wholly-owned subsidiary of Cboe Worldwide Holdings Limited.

5. *Brief description of business or functions:* Cboe Europe Indices Limited has applied with the FCA to operate as a Benchmark administrator in the UK and Europe. Once approved, the company intends to transfer the existing European benchmark administrator business from Cboe Europe Limited (which is current an authorized benchmark administrator) to Cboe Europe Indices Limited. It also intends to apply to the FCA to endorse Cboe global indices in accordance with the EU benchmark regulation.

6. *Copy of constitution*: Not applicable.

7. *Copy of articles of incorporation or association and amendments*: Not applicable.

8. *Copy of existing by-laws*: Not applicable.

9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions*: None

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year*: As of October 5, 2021 Cboe Europe Indices Limited is no longer associated with the Exchange.

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 which have recently been added or updated:

1. Member/TPH Modification Form: removed page 4 – Account Administrator Information – to publish as separate files.
2. Account Administrator Request Form – original document

Member/TPH Modification Form

MODIFICATION DOCUMENT – This form is to be completed by a current Member and/or Trading Permit/Privilege Holder ("TPH") for the types of changes described below. Additional documentation may need to be submitted depending on the change. An executed version of this Form can be delivered via email to MembershipServices@cboe.com

GENERAL INFORMATION	
Firm Name:	
CRD Number:	NFA Number:
CONTACT	
Name:	Email:
Title:	Phone:

CBOE EXCHANGE, INC. (CBOE (C1) OPTIONS)	
BUSINESS ACTIVITY(IES)	
☐ Add ☐ Remove	**Floor Access:** ☐ Associated with Floor Broker ☐ Market Maker
ELECTRONIC ACCESS	
☐ Add ☐ Remove	☐ Electronic Execution ☐ Market Maker ☐ Proprietary Trading ☐ Order Service Firm ☐ Transact Business w/the Public ☐ Other-Specify: _____ ☐ Clearing Firm: ☐ RTH and/or ☐ GTH
☐ Add ☐ Remove	☐ Electronic Execution ☐ Market Maker ☐ Proprietary Trading ☐ Order Service Firm ☐ Transact Business w/the Public ☐ Other-Specify: _____ ☐ Clearing Firm: ☐ RTH and/or ☐ GTH

RESPONSIBLE PERSON(S)

The Responsible Person must be a United States based officer, director or management-level employee of the TPH, who is responsible for the direct supervision and control of Associated Persons of the TPH. Each Responsible Person must sign an Cboe Individual Consent to Jurisdiction and hold the appropriate qualification examinations and registrations [e.g., TP (Series 24)] on WebCRD. A Responsible Person for a Foreign TPH does not need to be U.S.-based but must be an individual registered in WebCRD.

☐ Add ☐ Remove	Name:		CRD #:
	Title:		NFA ID:
	Phone:	Email:	
☐ Add ☐ Remove	Name:		CRD #:
	Title:		NFA ID:
	Phone:	Email:	

CBOE C2 EXCHANGE, INC. (C2 OPTIONS)	
BUSINESS CAPACITY(IES)	
☐ Add ☐ Remove	☐ Proprietary Trader ☐ Broker ☐ Clearing Participant ☐ Market Maker ☐ Transact Business w/the Public

☐ Add ☐ Remove	☐ Proprietary Trader ☐ Broker ☐ Clearing Participant ☐ Market Maker ☐ Transact Business w/the Public

RESPONSIBLE PERSON(S)

The Responsible Person must be a United States based officer, director or management-level employee of the TPH, who is responsible for the direct supervision and control of Associated Persons of the TPH. Each Responsible Person must sign an C2 Individual Consent to Jurisdiction and hold the appropriate qualification examinations and registrations [e.g., TP (Series 24)] on WebCRD.

☐ Add ☐ Remove	Name:		CRD #:
	Title:		NFA ID:
	Phone:	Email:	
☐ Add ☐ Remove	Name:		CRD #:
	Title:		NFA ID:
	Phone:	Email:	

CBOE FUTURES EXCHANGE, LLC (CFE)

BUSINESS ACTIVITY(IES)

☐ Add ☐ Remove	☐ Proprietary Trading Firm ☐ Brokerage Firm ☐ Clearing Firm ☐ Pool Manager
☐ Add ☐ Remove	☐ Proprietary Trading Firm ☐ Brokerage Firm ☐ Clearing Firm ☐ Pool Manager

POOL MANAGER CHANGE

Applicable to a Pooled Investment Vehicle - Identify the Pool Manager(s) - operator(s), investment manager(s) or investment advisor(s) of the Pool requiring an update.

☐ Add ☐ Remove	Name: _____NFA #: _____
☐ Add ☐ Remove	Name: _____NFA #: _____

CHANGE TO EXECUTIVE OFFICER(S)

Identify any changes to Chief Executive Officer, Chief Operating Officer, Chief Financial Officer, Chief Compliance Officer, or any equivalent position. Each new officer must complete pages 9-12 of the Organization TPH Application.

☐ Add ☐ Remove	Name:	CRD #:	NFA #:
	Title:		
	Phone:	Email:	
☐ Add ☐ Remove	Name:	CRD #:	NFA #:
	Title:		
	Phone:	Email:	
☐ Add ☐ Remove	Name:	CRD #:	NFA #:
	Title:		
	Phone:	Email:	

☐ Add ☐ Remove	Name:	CRD #:	NFA #:
	Title:		
	Phone:	Email:	

CLEARING CHANGE(S)

☐ **BZX** ☐ **BYX** ☐ **EDGA** ☐ **EDGX** ☐ **BZX OPTIONS** ☐ **EDGX OPTIONS** ☐ **CBOE OPTIONS** ☐ **C2** ☐ **CFE**

MPID/EFID	CURRENT CLEARING #	CHANGE TO CLEARING #	NEW CLEARING GUARANTEE ON FILE?	EFFECTIVE DATE (FIRST TRADE)
			☐ YES ☐ NO*	
			☐ YES ☐ NO*	
			☐ YES ☐ NO*	
			☐ YES ☐ NO*	
			☐ YES ☐ NO*	

*= *a current clearing guarantee is required for all applicable exchanges before a clearing change can be processed*

_____
Signature of Authorized Officer, Partner or Managing Member

_____
Printed Name

_____
Title

_____
Date

Account Administrator Request Form

Account Administrations will be able to grant access to tools within the Customer Web Portal including, but not limited to trade data downloads; order lookup; historical market data subscription; latency statistics; logical port request, modify or delete form; physical connection request form; invoices and billing files. An executed version of this Form can be delivered via email to MembershipServices@cboe.com

GENERAL INFORMATION	
Member/TPH Full Name:	
CONTACT	
Name:	Email:
Title:	Phone:

Does your firm have an active Account Administrator? ☐ Yes* ☒ No

* = Active Account Administrators have the ability to add/remove/edit Account Administrators or permission other access

ADD/REMOVE ACCOUNT ADMINISTRATOR(S)		
☐ Add ☐ Remove	Name:	
	Phone:	Email:
☐ Add ☐ Remove	Name:	
	Phone:	Email:
☐ Add ☐ Remove	Name:	
	Phone:	Email:

_____

Signature of Authorized Officer, Partner or Managing Member

_____

Printed Name

_____

Title

_____

Date

Exhibit M

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 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	Vimmelskaftet 43 3rd Floor Copenhagen Denmark 1161	45 88707858	Proprietary Trading
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
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 Rise Trading LLC	NA	NA	NA	NA	8/14/2018	NA	Member TPH	141 W. Jackson Boulevard Suite 300A Chicago, IL 60604	312-483-2147	Floor Broker
Alpha Direct 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
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
AMS Derivatives B.V.	8/14/2019	9/10/2019	9/10/2019	8/14/2019	12/1/2017	6/5/2019	Member TPH	Strawinskylann 3095 Amsterdam, 1077ZX Netherlands	31-020-708-7000	Proprietary Trading
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 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
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
Belvedere Trading LLC	11/1/2011	3/1/2012	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 Ste. 400 Chicago, IL 60607	608-213-4825	Market Maker
Bluefin Capital Management, 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
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	8/27/2019	8/27/2019	8/27/2019	2/1/2017	NA	Member TPH	300 N LaSalle Street Suite 2060 Chicago, IL 60654	708-967-6843	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 KYI-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 KYI-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	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 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.	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	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/Proprietary
Casey Securities LLC	NA	NA	NA	11/11/2021	8/3/2020	NA	Member TPH	One Montgomery Street 2nd 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

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
Chimera Securities, LLC	11/17/2017	11/27/2017	11/27/2017	11/17/2017	NA	NA	Sponsored Participant	27 Union Square West 4th Floor New York, NY 10003	646-597-6145	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
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
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	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
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 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
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	5/4/2021	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	10/11/2010	5/21/2010	5/21/2010	NA	NA	Member TPH	60 Wall Street New York, NY 10005	212-250-2500	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
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
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 D & F Man 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
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
Electronic Transaction Clearing, Inc.	5/7/2021	5/7/2021	5/7/2021	5/7/2021	NA	NA	Sponsored Participant	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 New York, NY 10018	646-475-6430	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
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	NA	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	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
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 Suite 7N Chicago, IL 60654	312-408-6659	Market Maker, Proprietary Trading
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
Great Point Capital LLC	10/27/2020	10/27/2020	10/27/2020	10/27/2020	NA	NA	Sponsored Participant	200 W. Jackson Blvd. Suite 1000 Chicago, IL 60606	312-356-4401	Proprietary Trading
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
Hainey Investments Limited	6/16/2014	NA	NA	NA	NA	NA	Sponsored Participant	Themistoki Dervi 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
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
Hehmeyer, 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
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 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 dba 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 dba 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
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	NA	NA	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
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
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

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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
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 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
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
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 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
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
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
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	NA	NA	Member TPH	314 W Superior Suite 200 Chicago, IL 60654	312-260-3044	Public Customer Business
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	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
Parkside Securities, Inc.	NA	NA	NA	3/22/2021	NA	NA	Member TPH	1948 Everidge Ct. Walnut Creek, CA 94597	312-286-6621	Proprietary Trading Public Customer Business
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
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
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
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
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
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
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
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

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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
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
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
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
Score Priority 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
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
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
Southern Trust 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
Squarepoint Ops LLC	6/12/2020	6/12/2020	6/12/2020	6/12/2020	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	9/24/2010	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	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
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
SVB Leerink 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
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 I Encintas, CA 92024	760-452-2451	Proprietary Trading
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
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
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
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	NA	NA	Member TPH	710 Johnnie Dodds Boulevard Suite 300 Mt. Pleasant, SC 29464	917-388-8644	Agency
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

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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	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
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
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	NA	NA	Member TPH	70 Hudson Street Hoboken, NJ 07030	201-706-7157	Clearing Services
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
Verition 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
Volant Liquidity, LLC	4/15/2011	NA	NA	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
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
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	1/25/2021	Member TPH	550 W Jackson Boulevard Suite 1000 Chicago, IL 60661	312-244-4712	Market Maker, Proprietary Trading
XR Securities LLC	10/10/2019	10/10/2019	10/10/2019	10/10/2019	NA	NA	Sponsored Participant	550 W Jackson Boulevard Suite 1000 Chicago, IL 60661	312-244-4712	Market Maker, Proprietary Trading
XTX Markets LLC	8/18/2020	8/18/2020	8/18/2020	8/18/2020	NA	NA	Sponsored Participant	10 Hudson Yards 40th Floor New York, NY 10001	212-660-9930	Proprietary Trading