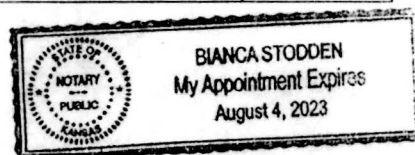


Form 1 Page 1 Execution Page	U.S. SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT	Date filed (MM/DD/YY) 02/10/20	OFFICIAL 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 an 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: <u>Cboe Exchange, Inc.</u>			
2. Provide the applicant's primary street address (Do not use a P.O. Box): <u>400 South LaSalle Street</u> <u>Chicago, Illinois 60605</u>			
3. Provide the applicant's mailing address (if different): _____			
4. Provide the business telephone and facsimile number: (913) 815-7000 (Telephone) (913) 815-7119 (Facsimile)			
5. Provide the name, title and telephone number of a contact employee: <u>Kyle Murray</u> VP, Associate General Counsel, <u>Cboe Exchange, Inc.</u> (913) 815-7121 (Name) (Title) (Telephone Number)			
6. Provide the name and address of counsel for the applicant: <u>Pat Sexton</u> <u>400 S. LaSalle Street</u> <u>Chicago, IL 60605</u>			
7. Provide the date that applicant's fiscal year ends: <u>December 31</u>			
8. Indicate legal status of the applicant: ☒ Corporation ☐ Sole Partnership ☐ Partnership ☐ Limited Liability Company ☐ Other (specify): _____			
If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant is domiciled): (a) Date (MM/DD/YY): <u>11/01/07</u> (b) State/Country of formation: <u>Delaware</u> (c) Statute under which applicant was organized: <u>General Corporation Law of the State of Delaware</u>			
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: <u>02/10/20</u> (MM/DD/YY) By: <u>[Signature]</u> (Signature) Subscribed and sworn before me this <u>10th</u> day of <u>Feb.</u> <u>2020</u> by <u>[Signature]</u> (Notary Public) My Commission expires <u>08/04/23</u> County of <u>Johnson</u> State of <u>Kansas</u>			
This page must always be completed in full with original, manual signature and notarization. Affix notary stamp or seal where applicable.			





February 10, 2020

Via Federal Express

Securities and Exchange Commission
Trading and Markets

Ms. Jeanette Marshall
Securities and Exchange Commission
100 F Street, N.E.
Mail Stop 7010
Washington, DC 20549-0001

FEB 12 2020
RECEIVED

SEC
Mail Processing
Section

FEB 12 2020
Washington DC
416

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

Dear Jeanette:

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 exhibits¹:

- Exhibit C (updated to reflect list of Directors and Committee Members);
- 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 & 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
VP, Associate General Counsel
913-815-7121

Enclosures

¹ See Attachment for a comprehensive list of updates to Exhibits C & M

Attachment

Summary of changes made to Exhibit C:

- Hanweck Associates, LLC was acquired and added as a new entity
- Hanweck Associates Pte. Ltd. was acquired and added as a new entity
- Hanweck Associates Limited was acquired and added as a new entity

Summary of changes made to Exhibit M:

Name Change

- Bluefin Trading, LLC was changed to Bluefin Capital Management, LLC

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)
 - Bryan Harkins (Vice President)
 - Chris Isaacson (Vice President)
 - Jackie Hancock (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.

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)
 - Bryan Harkins (Vice President)
 - Chris Isaacson (Vice President)
 - Jackie Hancock (Vice President and Controller)
 - 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.

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
- David Roscoe
- Jill Sommers
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Business Development)
- Eric Crampton (SVP, CTO)

- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer & Head Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- Jackie Hancock (VP, Controller)
- John Hiatt (VP, Product Development)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- 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 (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Registration)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulation)
- 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)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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
- David Roscoe
- Jill Sommers
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Business Development)
- Eric Crampton (SVP, CTO)

- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer & Head Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- Jackie Hancock (VP, Controller)
- John Hiatt (VP, Product Development)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- 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 (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Registration)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulation)
- 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)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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
- David Roscoe
- Jill Sommers
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Business Development)
- Eric Crampton (SVP, CTO)

- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer & Head Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- Jackie Hancock (VP, Controller)
- John Hiatt (VP, Product Development)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- 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 (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Registration)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulation)
- 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)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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
- David Roscoe
- Jill Sommers
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Business Development)
- Eric Crampton (SVP, CTO)

- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer & Head Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- Jackie Hancock (VP, Controller)
- John Hiatt (VP, Product Development)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- 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 (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Registration)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulation)
- 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)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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
- David Roscoe
- Jill Sommers
- Scott Wagner

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- Alexandra Albright (SVP, Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Gary Compton (VP, Communications)
- Jeff Connell (VP, Deputy Chief Regulatory Officer)
- Brent Coonrod (VP, Software Engineering)
- Arianne Criqui (SVP, Head of Options and Business Development)
- Eric Crampton (SVP, CTO)

- Gina DeRaimo (VP, Derivatives Institute)
- John Deters (EVP, Chief Strategy Officer & Head Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, & Chief Audit Exec)
- Todd Furney (VP, Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebnow (SVP & Chief Accounting Officer)
- Jackie Hancock (VP, Controller)
- John Hiatt (VP, Product Development)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- 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 (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Registration)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulation)
- 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)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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

- Jackie Hancock (FINOP, Treasurer)
- Bryan Upp (Chief Compliance Officer)
- Troy Yeazel (President)
- J. Patrick Sexton (Secretary)

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

Current Officers

- Ed Tilly (President and Chief Executive Officer)
 - Jill Griebenow (Vice President)
 - Jackie Hancock (Vice President and Controller)
 - Chris Isaacson (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.

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)
- Bryan Harkins (Vice President)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (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.

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)
- Sean Cleary (VP, Sales FX)
- 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)
- Jackie Hancock (VP, Controller)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- Greg Hoogasian (SVP, Chief Regulatory Officer)
- Chris Isaacson (EVP)
- Stephanie Marrin Lara (Deputy Chief Regulatory Officer)
- Andrew Lowenthal (EVP, International Expansion)

- Paul Reidy (VP, Cboe FX COO)
- Brian Schell (EVP, CFO and Treasurer)
- J. Patrick Sexton (EVP, General Counsel, and Secretary)
- Lisa Shemie (VP, Associate General Counsel and Cboe FX Chief Legal Officer)
- Aaron Weissenfluh (VP, CISO)

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)
 - Jill Griebenow (Vice President)
 - Bryan Harkins (Vice President)
 - Jackie Hancock (Vice President and Controller)
 - Chris Isaacson (Vice President)
 - Andrew Lowenthal (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.

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: 16 Collyer Quay, #2104, Sixteen Collyer Quay, 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: 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 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
- Julian Corner
- Angelo Evangelou
- Rebecca Fuller
- Ted Hood
- Dave Howson
- Kristian West
- John Woodman

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)
- Adam Eades (Chief Legal Officer)
- Stephanie Renner (CFO)

Standing Committees

Audit, Risk and Compliance Committee

- Richard Balarkas
- Rebecca Fuller
- Ted Hood

Remuneration Committee

- Rebecca Fuller
- Kristian West
- John Woodman

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: 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.
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

- Adam Eades
- Dave Howson
- John Woodman

Current Officers

- Dave Howson (Chief Executive Officer)
- Antonio Amelia (Secretary)
- Adam Eades (Chief Legal and Regulatory Officer)
- 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 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:* 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)
 - Brent Coonrod (Vice President)
 - Eric Crampton (Vice President)
 - Jennifer Golding (Vice President)
 - Jill Griebenow (Vice President)
 - Jackie Hancock (Vice President and Controller)
 - Bryan Harkins (Vice President)
 - Chris Isaacson (Vice President)
 - Laura Morrison (Vice President)
 - Dave Nadig (Senior Director, Content and ETF)
 - 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.

R. 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:* No changes.
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

Current Officers
 - Patricia Hidalgo (General Manager)
 - Dave Nadig (President)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

S. 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)
- Sean Cleary (Vice President)
- Eric Crampton (SVP, CTO)
- John Deters (EVP, Chief Strategy Officer & Head of Multi-Asset Solutions)
- James Enstrom (Senior Vice President & Chief Audit Executive)
- Todd Furney (VP, and Chief Risk Officer)
- Jennifer Golding (VP, Associate General Counsel, Chief Litigation Officer)
- Jill Griebenow (SVP & Chief Accounting Officer)
- Bryan Harkins (Executive Vice President, Head of Markets Division)
- Mark Hemsley (Senior Vice President)
- Gregory Hoogasian (Senior Vice President & Chief Regulatory Officer)
- Chris Isaacson (Executive Vice President & COO)
- Andrew Lowenthal (Executive Vice President, International Expansion)
- Stephanie Marrin (Vice President and Deputy Chief Regulatory Officer)
- Paul Reidy (Vice President)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)

- Brian Schell (Executive Vice President, Chief Financial Officer & Treasurer)
- Lisa Shemie (Vice President, Associate General Counsel & Cboe SEF Chief Legal Officer)
- Jackie Hancock (Vice President and Controller)
- Aaron Weissenfluh (Vice President & Chief Information Security Officer)

Managers

- Ed Tilly
- Gilbert Bassett
- 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.

T. 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.

U. Cboe Global Markets, Inc.

1. *Name:* Cboe Global Markets, 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), 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
- Frank English
- William Farrow
- Janet Froetscher
- Jill Goodman
- Roderick Palmore
- James Parisi
- Joe Ratterman
- Michael Richter
- Jill Sommers
- Carole Stone
- Eugene Sunshine
- Fredric Tomczyk

Current Officers

- Ed Tilly (President and Chief Executive Officer)
- John Deters (EVP, Chief Strategy Officer and Head of Multi-Asset Solutions)
- Jill Griebenow (SVP & Chief Accounting Officer)
- Bryan Harkins (EVP, Head of Markets Division)
- Dave Howson (EVP, President Europe)
- Chris Isaacson (EVP and COO)

- Brian Schell (EVP, and CFO)
- J. Patrick Sexton (EVP, General Counsel and Corporate Secretary)

Compensation Committee

- Frank English
- Janet Froetscher
- Edward Fitzpatrick
- James Parisi

Audit Committee

- William Farrow
- Carole Stone
- Michael Richter
- James Parisi

Nominating and Governance Committee

- Frank English
- Jill Goodman
- Roderick Palmore
- Carole Stone
- Janet Froetscher

Finance and Strategy Committee

- Frank English
- Jill Goodman
- Joe Ratterman
- Roderick Palmore
- Jill Sommers

Risk Committee

- William Farrow
- Edward Fitzpatrick
- Janet Froetscher
- Michael Richter
- Carole Stone

Indemnity Committee

- Ed Tilly

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

V. 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

- Ed Tilly
- 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)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Joseph Caauwe (CFE Managing Director)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Catherine Clay (SVP, Business Development)
- Eric Crampton (SVP, CTO)
- John Deters (Executive Vice President, Chief Strategy Officer & Head of
Multi-Asset Solutions)
- James Enstrom (Senior Vice President & Chief Audit Executive)
- 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)
- Jackie Hancock (Vice President and Controller)
- Bryan Harkins (Executive Vice President, Head of Markets Division)
- Mark Hemsley (Senior Vice President)
- Gregory Hoogasian (Senior Vice President & Chief Regulatory Officer)
- Chris Isaacson (Executive Vice President, CFE Senior Managing Director, & COO)
- Jennifer Lamie (VP & Chief Regulatory Advisor)
- Stephanie Marrin Lara (VP & Deputy Chief Reg Officer)
- Andrew Lowenthal (Executive Vice President, International Expansion, and CFE Senior Managing Director)
- Matthew McFarland (VP, Head of Futures and CFE Managing Director)
- Arthur Reinstein (Senior Vice President, Deputy General Counsel & CFE Chief Legal Officer)
- J. Patrick Sexton (Executive Vice President, General Counsel & Corporate Secretary)
- Brian Schell (Executive Vice President, Chief Financial Officer & Treasurer)
- Aaron Weissenfluh (Vice President & Chief Information Security Officer)
- Troy Yeazel (Senior Vice President, U.S. Electronic Trading Operations and CFE Managing Director)

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.

W. 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)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (Vice President)
- Marc Magrini (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.

X. 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)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (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.

Y. 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 Griebnow (Vice President)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (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.

Z. 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)
- Lawrence Bresnahan (VP, Market & Member Regulation)
- Jen Browning (VP, Head of Human Resources)
- Kevin Carrai (VP, Market Data and Access Services)
- Catherine Clay (SVP, Information Solutions)
- Sean Cleary (VP, Sales FX)
- 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)
- John Deters (EVP, Chief Strategy Officer and Head of Multi-Asset Solutions)
- Laura Dickman (VP, Associate General Counsel)
- James Enstrom (SVP, Chief Audit Executive) Bats
- Angelo Evangelou (SVP, Market Policy and Government Affairs)

- 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)
- Jackie Hancock (VP, Controller)
- Bryan Harkins (EVP, Head of Markets Division)
- Mark Hemsley (SVP)
- John Hiatt (VP, Product Development)
- Rob Hocking (SVP, Head of Derivatives Strategy)
- Gregory Hoogasian (SVP, Chief Regulatory Officer)
- Chris Isaacson (EVP, Chief Operating Officer)
- Adam Inzirillo (SVP, Head of U.S. Equities)
- Brett Johnson (VP, Software Engineering)
- Carol Kennedy (VP, Chief Communications Officer)
- Deborah Koopman (VP, Investor Relations)
- Jennifer Lamie (VP, Chief Regulatory Advisor)
- Andrew Lowenthal (EVP, International Expansion)
- Marc Magrini (VP, Administration)
- Stephanie Marrin Lara (VP, Deputy Chief Regulatory Officer)
- Michael Mollet (VP, MAS Product Development)
- Anthony Montesano (VP, TSD and Membership Services)
- Laura Morrison (SVP, ETP Listings)
- Kyle Murray (VP and Associate General Counsel)
- Dan Overmyer (VP, Options Regulations)
- Paul Reidy (VP, Cboe FX COO)
- 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)
- Lisa Shemie (VP, Associate General Counsel, Cboe FX and Cboe SEF Chief Legal Officer)
- Steven Sinclair (VP, Systems Development)
- Eileen Smith (VP, Data and Analytics)
- Aaron Weissenfluh (VP, CISO)
- Troy Yeazel (SVP, Operations)
- Vivian Yiu (VP, Product Strategy)

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

AA. 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 Griebnow (Vice President)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (Vice President)
- Andrew Lowenthal (Vice President)

- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Aaron Weissenfluh (Vice President, CISO)

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

BB. Cboe UK Limited

1. *Name:* Cboe UK Limited
Address: 11 Monument Street, 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.

CC. 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)
 - Jackie Hancock (Vice President and Controller)
 - Chris Isaacson (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.

DD. Loan Markets, LLC

1. *Name:* Loan Markets, LLC
Address: 400 S. 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)
 - Jackie Hancock (Vice President and Controller)
 - Chris Isaacson (Vice President)
 - Andrew Lowenthal (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.

EE. 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
- Bryan Harkins
- 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)
- Jackie Hancock (Vice President and Controller)
- Bryan Harkins (Vice President)
- Chris Isaacson (Vice President)
- Andrew Lowenthal (Vice President)
- Jim Roche (Vice President)
- Brian Schell (Treasurer)

- J. Patrick Sexton (Secretary)
- Aaron Weissenfluh (Chief Information Security Officer)

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

FF. 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:* 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:* There are no directors or officers of
Signal Trading Systems, LLC.
10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

GG. 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
- Karan Sood
- Catherine Clay

Current Officers

- Karan Sood (Chief Executive Officer)
- 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

HH. Cboe Hong Kong Limited

1. *Name:* Cboe Hong Kong Limited
Address: 66th Floor, The Center, 99 Queen's 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
 - None
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

II. Cboe Silexx, LLC

1. *Name:* Cboe Silexx, LLC
Address: 400 South LaSalle Street, Chicago, IL 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)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (Vice President)
- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Aaron Weissenfluh (Chief Information Security Officer)

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

JJ. Digital Asset Benchmark Administration, LLC

1. *Name:* Digital Asset Benchmark Administration, LLC
Address: 400 South LaSalle Street, Chicago, IL 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 (Vice President and Chief Audit Executive)
- Todd Furney (Chief Risk Officer)
- Jennifer Golding (Vice President))
- Jill Griebenow (Vice President)
- Jackie Hancock (Vice President and Controller)
- Chris Isaacson (Vice President)
- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Aaron Weissenfluh (CISO)

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

KK. CBOE Europe B.V.

1. *Name:* CBOE Europe B.V.
Address: 1212 Gustav Mahlerlaan, 108La Amsterdam (Netherlands)
2. *Form of organization:* Private Company Limited by Shares
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

- Mark Hemsley
- Adam Eades
- Ruben Hilhorst
- Shyam Savania

Current Officers

- Adam Eades (President)
- Ruben Hilhorst (Head of Compliance)
- Shyam Savania (Operations Manager)

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

LL. Cboe Off-Exchange Services, LLC

1. *Name:* Cboe Off-Exchange Services, LLC
Address: 1209 Orange Street, Wilmington, County of New Castle, DE 19801
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)
 - Jackie Hancock (Vice President and Controller)
 - Bryan Harkins (Vice President)
 - Chis Isaacson (Vice President)
 - Andrew Lowenthal (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.

MM. Cboe Global Indices, LLC

1. *Name:* Cboe Global Indices, LLC
Address: 400 South LaSalle Street, Chicago, IL 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)
 - Jennifer Golding (Vice President and Chief Litigation Officer)
 - Jill Griebenow (Vice President)
 - Jackie Hancock (Vice President and Controller)
 - Rob Hocking (Vice President)
 - Chris Isaacson (Vice President)
 - Brian Schell (Treasurer)
 - J. Patrick Sexton (Secretary)
 - Aaron Weissenfluh (Vice President and CISO)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

NN. 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:* 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
 - Stephanie Renner
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.

OO. 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

- Paul Reidy
- Bryan Harkins
- Lisa Shemie
- Roman Sturzenegger
- Jonathan Weinberg

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

PP. Hanweck Associates, LLC

1. *Name:* Hanweck Associates, LLC
Address: 77 Battery Place #916
New York, NY 10280
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:* See attached for current operating agreement and articles of organization.
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 Officer

- 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)
- Jackie Hancock (Vice President and Controller)
- Gerald Hanweck (Vice President)

- Rob Hocking (Vice President)
- Chris Isaacson (Chief Operating Officer)
- Brian Schell (Treasurer)
- J. Patrick Sexton (Secretary)
- Aaron Weissenfluh (Vice President and Chief Information Security Officer)

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

QQ. Hanweck Associates Pte. Ltd.

1. *Name:* Hanweck Associates Pte. Ltd.
Address: 8 Wilkie Road #30-01 Wilkie Edge
Singapore 228095
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:* See attached.
7. *Copy of articles of incorporation or association and amendments:* See attached.
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
 - Goh Hoi Lai
 - Sardool Singh
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

RR. 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:* See attached.
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
 - Gerald Hanweck Jr.
 - Michael Hollingsworth
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

SS. Cboe International Holdings Limited

1. *Name:* Cboe International 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 1985 on February 5, 2015.
4. *Brief description of nature and extent of affiliation:* Cboe International Holdings Limited is wholly-owned by Cboe Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Cboe International Holdings Limited is a holding company of Cboe FX Europe Limited,,
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 September 24, 2019 Cboe International Holdings Limited ceased to exist

TT. CBOE Stock Exchange, LLC

1. *Name:* CBOE Stock 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 31, 2006.
4. *Brief description of nature and extent of affiliation:* CBOE Stock Exchange, LLC
is a 49.96%-owned subsidiary of Cboe Exchange, Inc.
5. *Brief description of business or functions:* CBOE Stock Exchange, LLC operated
the CBOE Stock Exchange, which acted as a trading market for securities other
than options as a facility of Cboe Exchange, Inc. CBOE Stock Exchange, LLC
was approved by the SEC in March 2007. CBOE Stock Exchange, LLC ceased
trading operations on April 30, 2014.
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 September 30, 2019 CBOE Stock
Exchange, LLC ceased to exist.

Form 1, Exhibit C Index of Attachments

- A Bats Global Markets Holdings, Inc.
- B Direct Edge LLC
- C Cboe BZX Exchange, Inc.
- D Cboe BYX Exchange, Inc.
- E Cboe EDGA Exchange, Inc.
- F Cboe EDGX Exchange, Inc.
- G Cboe C2 Exchange, Inc.
- H Cboe Trading, Inc.
- I Omicron Acquisition Corp.
- J Cboe FX Holdings, LLC
- K Cboe FX Markets, LLC
- L Cboe FX Services, LLC
- M Cboe FX Europe Limited
- N Cboe FX Asia Pte. Limited
- O Cboe Europe Limited
- P Cboe Chi-X Europe Limited
- Q Cboe ETF.com, Inc.
- R IndexPubs S.A.
- S Cboe SEF, LLC
- T Cboe Worldwide Holdings Limited
- U Cboe Global Markets, Inc.
- V Cboe Futures Exchange, LLC
- W Cboe Building Corporation
- X Cboe, LLC
- Y Cboe III, LLC
- Z Cboe Bats, LLC

- AA Cboe Livevol, LLC
- BB Cboe UK Limited
- CC Cboe Vest, LLC
- DD Loan Markets, LLC
- EE Cboe Data Services, LLC
- FF Signal Trading Systems, LLC
- GG Cboe Vest Group Inc.
- HH Cboe Hong Kong Limited
- II Cboe Silexx, LLC
- JJ Digital Asset Benchmark Administration, LLC
- KK CBOE Europe B.V.
- LL Cboe Off-Exchange Services, LLC
- MM Cboe Global Indices, LLC
- NN Cboe Europe Indices Limited
- OO Cboe Switzerland GmbH
- PP Hanweck Associates, LLC (see attached)
- QQ Hanweck Associates Pte. Ltd. (see attached)
- RR Hanweck Associates Limited (see attached)

PP Hanweck Associates, LLC

(This form must be printed or typed in black ink)

ARTICLES OF ORGANIZATION
OF

HANWECK ASSOCIATES, LLC

(Insert name of Limited Liability Company)

Under Section 203 of the Limited Liability Company Law

FIRST: The name of the limited liability company is: Hanweck Associates, LLC

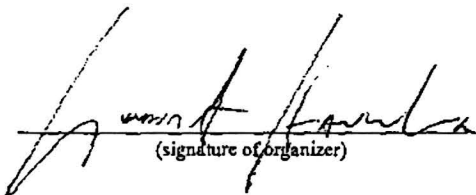
SECOND: The county within this state in which the office of the limited liability company is to be located is: NEW YORK COUNTY

THIRD: The Secretary of State is designated as agent of the limited liability company upon whom process against it may be served. The address within or without this state to which the Secretary of State shall mail a copy of any process against the limited liability company served upon him or her is:

70 BATTERY PL. #916

NEW YORK, NY 10280

646-215-3859


(signature of organizer)

GERALD A. HANWECK, JR.
(print or type name of organizer)

ARTICLES OF ORGANIZATION
OF

HANWECK ASSOCIATES, LLC

(Insert name of Limited Liability Company)

Under Section 203 of the Limited Liability Company Law

Filed by: GERALD A. HANWECK, JR.
(Name)

70 BATTERY PL #916
(Mailing address)

NEW YORK, NY 10280
(City, State and ZIP code)

NOTE: • This form was prepared by the New York State Department of State for filing articles of organization for a domestic limited liability company. It does not contain all optional provisions under the law. You are not required to use this form. You may draft your own form or use forms available at legal stationery stores. The Department of State recommends that legal documents be prepared under the guidance of an attorney. The certificate must be submitted with a \$200 filing fee made payable to the Department of State.

**WRITTEN CONSENT
OF THE SOLE MEMBER
OF
HANWECK ASSOCIATES, LLC**

February 3, 2020

The undersigned, being the sole member (the “*Member*”) of Hanweck Associates, LLC, a New York limited liability company (the “*Company*”), pursuant to the Company’s Second Amended and Restated Limited Liability Company Operating Agreement (the “*Operating Agreement*”) and the New York State Limited Liability Company Law, does hereby consent to, approve, and adopt the following resolutions:

Removal and Election of Managers

WHEREAS, on February 3, 2020, the Member acquired all of the issued and outstanding membership interests of the Company pursuant to that certain Equity Purchase Agreement (the “*Purchase Agreement*”) by and among the Member, the Company, Gerald A. Hanweck, Jr., a resident of the State of New York, Michael R. Hollingsworth, a resident of the State of New Jersey, Argentum Capital Partners III, L.P., a Delaware limited partnership, International Securities Exchange Holdings, Inc., a Delaware corporation, Compo Seven Capital, LLC, a Connecticut limited liability company and Gerald A. Hanweck, Sr., a resident of the State of Virginia and Gerald A. Hanweck, Jr., as Seller Representative.

NOW THEREFORE, BE IT RESOLVED, that Gerald A. Hanweck, Jr., Michael R. Hollingsworth, Peter Armstrong, Jean-Jacques Louis, Walter H. Barandiaran, Gerald A. Hanweck, Sr. and Terrence M. Belton be, and he hereby are, removed as the managers of the Company; and

FURTHER RESOLVED, that Edward T. Tilly, Christopher A. Isaacson and Brian N. Schell be, and hereby are, elected as managers of the Company, to serve until their successors are elected, or until their respective earlier death, resignation or removal, and are confirmed as being the managers of the Company.

Third Amended and Restated Operating Agreement

WHEREAS, pursuant to Section 12.2 of the Operating Agreement, the Member desires to amend and restate the Operating Agreement, in substantially the same form, terms and provisions of that certain Third Amended and Restated Limited Liability Company Operating Agreement (the “*Amended and Restated Operating Agreement*”), attached hereto as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED, that the Amended and Restated Operating Agreement attached hereto as Exhibit A be and hereby is approved, adopted and ratified as the Third Amended and Restated Limited Liability Company Operating Agreement of the Company.

General Authorization

RESOLVED, that the officers of the Company be, and each of them hereby is, authorized and directed to execute and deliver all such consents, certificates, assignments, agreements and all other instruments, and to do all such acts and things, for and in the name of the Company as may be necessary or appropriate in order to carry out the purposes of the foregoing resolutions; and

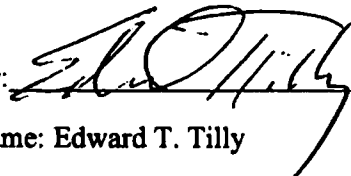
FURTHER RESOLVED, that any such actions heretofore taken by the officers or employees of the Company in connection with any of the foregoing resolutions or any documents relating thereto, are hereby ratified, confirmed and approved and declared to be official actions of the Company.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the undersigned, being the sole member of the Company, has caused this instrument to be executed and directed that the executed copy thereof be filed with the corporate records of the Company as of the date first set forth above.

MEMBER:

CBOE GLOBAL MARKETS, INC.

By:  _____

Name: Edward T. Tilly

Title: President and Chief Executive Officer

Exhibit A

Third Amended and Restated Limited Liability Company Operating Agreement.

See attached.

**THIRD AMENDED AND RESTATED LIMITED LIABILITY COMPANY OPERATING
AGREEMENT**

OF

HANWECK ASSOCIATES, LLC

This Third Amended and Restated Limited Liability Company Operating Agreement (this “Agreement”) of Hanweck Associates, LLC, a New York limited liability company (the “Company”), is entered into as of February 3, 2020 by Cboe Global Markets, Inc., a Delaware corporation (the “Member”) and the Company.

WHEREAS, the Company was formed on November 25, 2003 under the provisions of the New York State Limited Liability Company Law (as amended from time to time, and any successor to such statute, the “Act”) by causing to be filed the Articles of Organization with the Secretary of State of the State of New York, and the Company was governed by a Limited Liability Company Operating Agreement effective as of January 1, 2008 entered into by Gerald A. Hanweck, Jr. (“Hanweck”) and Michael R. Hollingsworth (“Hollingsworth”);

WHEREAS, Hanweck, Hollingsworth and International Securities Exchange Holdings, Inc., a Delaware corporation (“ISE”) entered into an Amended and Restated Limited Liability Company Agreement of the Company, effective as of February 2, 2010, in connection with the purchase of certain membership interests in the Company by ISE;

WHEREAS, Hanweck, Hollingsworth, ISE, Gerald A. Hanweck, Sr., Argentum Capital Partners III, L.P., a Delaware limited partnership (“Argentum”) and Compo Seven Capital, LLC, a Connecticut limited liability company (“Compo Seven” and, together with Hanweck, Hollingsworth, ISE, Gerald A. Hanweck, Sr. and Argentum, the “Prior Members”) entered into a Second Amended and Restated Limited Liability Company Operating Agreement, effective as of November 4, 2015 (the “Prior LLC Operating Agreement”), in connection with the purchase of certain membership interests in the Company by Argentum and Compo Seven;

WHEREAS, on the date hereof, in connection with the consummation of the transactions contemplated by that certain Equity Purchase Agreement, dated as the date hereof, by and among the Company and the other parties thereto, each of the Prior Members sold 100% of its respective membership interests in the Company to the Member, which Member is now the sole Member of the Company; and

WHEREAS, the Member desires to amend and restate the Prior LLC Operating Agreement to govern the affairs of the Company and the conduct of its business, as follows.

NOW, THEREFORE, in consideration of the agreements and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Member hereby adopts and approves this Agreement to govern the affairs of the Company and the conduct of its business, as follows:

1. Name. The name of the Company is Hanweck Associates, LLC.
2. Purpose. The purpose of the Company shall be to engage in any lawful act or activity for which limited liability companies may be organized under the Act as determined by the Board of Managers (as defined herein).
3. Formation. The Company was organized on November 25, 2003, in accordance with and pursuant to the Act.
4. Duration. Unless the Company shall be earlier dissolved, wound-up and terminated in accordance with Sections 18 and 19, it shall continue in existence in perpetuity.
5. Offices. The principal place of business and office of the Company shall be located at, and the Company's business shall be conducted from, the same location as the principal place of business and office of the Member or such other place or places as the Board of Managers may from time to time designate.
6. Registered Agent and Office. The registered agent of the Company in the State of New York shall be as specified in the Company's Articles of Organization. The registered office of the Company in the State of New York shall be at 30 Broad Street, 42nd Floor, New York, NY 1004. The Board of Managers may, at any time, designate another registered agent and/or registered office of the Company and may amend the Articles of Organization of the Company to reflect such designation without the consent of the Member or any other person or entity.
7. Member. The Member is admitted as the sole member of the Company and shall be shown as such on the books and records of the Company. No other person shall be admitted as a member of the Company, and no additional interest in the Company shall be issued, without appropriate amendments to this Agreement, approved by the Member.
8. Other Activities of Member. The Member may engage in or possess an interest in other business ventures of any nature, whether or not similar to or competitive with the activities of the Company.
9. Management of the Company.
 - (a) *Management by Board of Managers*. The business and affairs of the Company shall be managed by a board of Managers (the "Board of Managers"). The number of persons constituting the Board of Managers shall be fixed from time to time by the Member, and the Board of Managers shall consist of individuals elected by the Member (each such individual, a "Manager"). Managers shall hold office for such term as may be determined by the Member and, if later, until their respective successors are elected by the Member, or until the respective Manager's earlier death, resignation or removal. Managers may be removed from, and substitute or additional Managers may be appointed to, the Board of Managers, at any time by the Member. Each Manager is hereby designated as a "manager" of the Company within the meaning of the Act.

(b) *Meetings of the Board of Managers.* The Board of Managers shall meet as often as is necessary or desirable to carry out its functions on such dates and times as the Board of Managers may determine from time to time. Meetings of the Board of Managers shall be held at the principal place of business of the Company or at any other place that the Board of Managers may determine from time to time. Members of the Board of Managers may participate in such meetings by conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting. The presence of at least 50% of the Managers then in office shall constitute a quorum for the transaction of business; provided that a quorum shall not exist unless at least two Managers are present. Notice of the date, time and purpose of each regular and special meeting shall be delivered personally or by telephone to each Manager or sent by first class mail, electronic mail or facsimile transmission, charges prepaid, addressed to such Manager at such Manager's mailing or electronic mail address or facsimile address or number as appears on the records of the Company. Such notice shall be delivered to each Manager at least one day prior to the date scheduled for a meeting. A Manager may waive the requirement of notice of meeting either by attending a meeting for which notice was not given or providing a written waiver (email is sufficient) before or after such meeting.

(c) *Actions of the Board of Managers; Action by Written Consent.* The act of a majority of the Managers present at any meeting of the Board of Managers at which there is a quorum shall be the act of the Board of Managers. Any action required or permitted to be taken at a meeting of the Board of Managers may be taken without a meeting and without prior notice if written consents, setting forth the action so taken, are executed by the members of the Board of Managers representing the minimum number of votes that would be necessary to authorize or to take such action at a meeting at which all members of the Board of Managers permitted to vote were present and voted. Any such written consents may be executed in any number of counterparts, with each such counterpart being deemed to be an original instrument, and all such counterparts together constituting the same consent. The Board of Managers may establish such other rules and procedures for its deliberations as it may deem necessary or desirable.

(d) *Powers of the Board of Managers.* The Board of Managers shall have the power by itself or through agents, and shall be authorized and empowered on behalf and in the name of the Company, to carry out all of the objects and purposes of the Company and to perform all acts and enter into and perform all acts and other undertakings that it may in its discretion deem necessary or advisable in that regard, in each case in accordance with the provisions of this Agreement. A Manager acting individually in his or her capacity as a Manager shall have the power to act for or bind the Company to the extent authorized to do so by the Board of Managers.

(e) *Other Activities of Managers.* The Managers shall not be required to manage the Company as their sole and exclusive function, and they may have other business interests and may engage in other activities in addition to those relating to the Company.

(f) *Officers.* The Company may have such officers and agents with such respective rights and duties as the Board of Managers may from time to time determine. The Board of Managers may delegate to one or more officers, agents or employees or other persons (who shall not be deemed "managers" within the meaning of the Act by virtue of such

delegation) any and all powers to manage the Company that the Managers possess under this Agreement and the Act. All officers of the Company appointed by the Board of Managers shall hold office for such term as may be determined by the Board of Managers or, if later, until their respective successors are appointed, or until the respective officer's earlier death, resignation or removal. Any officer may be removed from office at any time either with or without cause by the president of the Company or the affirmative vote of a majority of the Managers then in office. Each of the officers of the Company shall have the powers and duties prescribed by the Board of Managers and, unless otherwise prescribed by the Board of Managers, if the title assigned to an officer is one commonly used for officers of a business corporation formed under the New York Business Corporation Law, the assignment of such title shall constitute the delegation to such person of the authorities and duties that are normally associated with that office.

10. Voting Powers of Member.

(a) *General Rules.* The Member, as such, shall not have any voting rights or take any part in the day-to-day management or conduct of the business of the Company, nor shall the Member have any right or authority to act for or bind the Company. Actions and decisions that do require the approval of the Member pursuant to any provision of this Agreement or applicable law may be authorized or made by affirmative vote of the Member. Such vote may be taken at a meeting of the Member or by written consent without a meeting.

(b) *Meetings.* An annual meeting of the Member may be held for the purpose of electing Managers and conducting such additional business as shall properly come before the meeting in any calendar year. In addition, the Member may call a meeting to consider approval of an action or decision under any provision of this Agreement or applicable law.

(c) *Action by Written Consent.* Any action required or permitted to be taken at a meeting of the Member may be taken without a meeting if, prior or subsequent to the action, a written consent in lieu of a meeting, setting forth the action so taken or to be taken shall be signed by such Member.

11. Initial Capital Contribution. Concurrently with or prior to the execution of this Agreement, the Member has made one or more capital contributions to the Company in exchange for, or has otherwise acquired, 100% of the membership interests in the Company.

12. Additional Capital Contributions. The Member may, but is not required to, make additional capital contributions to the Company. All capital contributions shall be made at the option of the Member and shall be made as and when the Member deems appropriate.

13. Loans. If the Member makes any loans to the Company, or advances money on the Company's behalf, the amount of any such loan or advance shall not be deemed an increase in, or contribution to, the capital contribution of the Member. If the Company makes any loans to the Member, or advances money on the Member's behalf, the amount of any such loan or advance shall not be deemed a decrease in capital of the Member or a distribution to the Member. Interest shall accrue on any such loan or advance at an annual rate agreed to by the

Company and the Member (but not in excess of the maximum rate allowable under applicable usury laws).

14. Allocation of Profits and Losses. All of the Company's profits and losses shall be allocated to the Member.

15. Distributions. The Company may distribute funds or other assets to the Member at such times and in such amounts as the Board of Managers may determine. In determining the amount of funds to distribute pursuant to this Section 15, the Board of Managers may consider such factors as the need to allocate funds to any reserves for Company contingencies or any other Company purposes that the Board of Managers reasonably deems necessary or appropriate. Notwithstanding any of the foregoing, the Company shall not make a distribution to the Member on account of its interest in the Company if such distribution would violate the Act or other applicable law.

16. Return of Capital. The Member has no right to receive, but the Board of Managers has absolute discretion to make, subject to the Act, any distributions to the Member which include a return of all or any part of the Member's capital contribution; provided that upon the dissolution of the Company, the assets of the Company shall be distributed as provided in the applicable provisions of the Act.

17. No Certification of Interests. The membership interests in the Company shall not be certificated.

18. Dissolution. The Company shall be dissolved and its affairs wound up upon the first to occur of the following events: (i) the affirmative approval of the Board of Managers to dissolve the Company; (ii) the written consent of the Member to dissolve the Company; (iii) at any time there are no members of the Company, unless the Company is continued in accordance with the Act; or (iv) when required by a decree of judicial dissolution entered in accordance with the Act. Such dissolution and winding up shall be carried out in accordance with the Act. The bankruptcy (as defined in the Act) of the Member shall not cause the Member to cease to be a member of the Company, and upon the occurrence of such an event, the Company shall continue without dissolution.

19. Winding Up of Company. Upon dissolution, the Company's business shall be liquidated in an orderly manner. The Board of Managers shall act as the liquidator to wind up the affairs of the Company pursuant to this Agreement. In performing its duties, the Board of Managers is authorized to sell, distribute, exchange or otherwise dispose of the assets of the Company in accordance with the Act and in any reasonable manner that the Board of Managers shall determine. The Company shall terminate when (i) all of the assets of the Company, after payment of or due provision for all debts, liabilities and obligations of the Company shall have been distributed to the Member in the manner provided for in this Agreement and (ii) the Articles of Organization of the Company shall have been canceled in the manner required by the Act.

20. Liability; Exculpation and Indemnification.

(a) *Limited Liability Generally.* Except as otherwise expressly required by the Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise, shall be the debts, obligations and liabilities solely of the Company, and the Member, Managers, officers, employees and agents of the Company shall not be obligated personally for any such debt, obligation or liability of the Company solely by reason of being a Member, Manager, officer, employee or agent of the Company.

(b) *Exculpation.* Neither the Member nor any Manager nor any officer nor member of a committee of the Company (a “Covered Person”), shall be liable to the Company or any other person or entity who is bound by this Agreement for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this Agreement; provided that a Covered Person shall be liable for any such loss, damage or claim incurred if such Covered Person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law.

(c) *Indemnification of Member, Officers and Managers.* The Company shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any Covered Person who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a “proceeding”), by reason of the fact that he or she is or was a Covered Person, or, while a Covered Person, is or was serving at the request of the Company as a director or officer, employee or agent of another company, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including reasonable attorneys’ fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding; provided, however, that no indemnification may be made to or on behalf of any such Covered Person if (A) the Covered Person’s conduct involved bad faith, willful or intentional misconduct, or a knowing violation of law, as determined by a final, nonappealable order of a court of competent jurisdiction or other final adjudication adverse to such Covered Person, (B) the Covered Person’s conduct involved a transaction from which such Covered Person derived an improper personal benefit, as determined by a final, nonappealable order of a court of competent jurisdiction or other final adjudication adverse to such Covered Person, (C) there was a circumstance under which the liability provisions for improper distributions of Section 508 of the Act are applicable, or (D) there was a breach of such Covered Person’s duties or obligations under Section 409 of the Act (taking into account any restriction, expansion, or elimination of such duties and obligations provided for in this Agreement). In connection with the foregoing, the termination of any action, suit, or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the Covered Person acted in bad faith, that the Covered Person’s conduct constituted willful or intentional misconduct or a knowing violation of law, or that the Covered Person derived an improper personal benefit. Notwithstanding the preceding, except as otherwise provided in Section 20(d), the Company shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of

such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Managers.

(d) *Advancement of Expenses.* Expenses (including reasonable attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Company in advance of the final disposition of such proceeding; provided, however, that the Company shall not be required to advance any expenses to a person against whom the Company directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Company of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with New York law that such Covered Person is not entitled to be indemnified for such expenses under this Section 20.

(e) *Enforcement.* If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Section 20 is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Company, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Company shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(f) *Deemed Contract.* The provisions of this Section 20 shall be deemed to be a contract between the Company and each Covered Person who serves in any such capacity at any time while this Section 20 is in effect, and any repeal or modification of any applicable law or of this Section 20 shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(g) *Indemnification of Employees and Agents.* Persons not expressly covered by the foregoing provisions of this Section 20, including without limitation those (i) who are or were employees or agents of the Company, or are or were serving at the request of the Company as employees or agents of another company, partnership, joint venture, trust or other enterprise, or (ii) who are or were directors, officers, employees or agents of a constituent company absorbed in a consolidation or merger in which the Company was the resulting or surviving company, or who are or were serving at the request of such constituent company as directors, officers, employees or agents of another company, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Managers. The Board of Managers may also enter into separate and/or additional documents with any Covered Person or any other person which may have the effect of granting additional indemnification rights, and/or establishing additional rights, or altering or supplementing the terms of this Section 20 without the consent of any other person.

(h) *Nonexclusivity of Rights.* The rights conferred on any Covered Person by this Section 20 shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a Manager, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(i) *Collateral Source Recovery.* The Company's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another company, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other company, partnership, joint venture, trust, enterprise or non-profit entity.

(j) *Repeal or Modification.* Any repeal or modification of the foregoing provisions of this Section 20 shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(k) *Insurance.* The Company may purchase and maintain insurance, at its expense, to protect itself and any Member, Manager, officer, manager, trustee, employee or agent of the Company or, at its request, as a director, officer, employee or agent of another company, partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Company would have the power to indemnify such person against such expense, liability or loss under the Act.

21. Application for Admission to Transact Business. The Member shall file, on behalf of the Company, in accordance with applicable law, an application to transact business as a foreign limited liability company in any jurisdiction where the Member deems such a filing or similar filing to be appropriate.

22. Governing Law. This Agreement shall be governed by, and construed under, the laws of the State of New York (without regard to conflict of laws principals), all rights and remedies being governed by such laws.

23. Fiscal Year. The fiscal year of the Company shall end on December 31.

24. Tax Treatment. The Member intends that the Company will be classified as a disregarded entity for federal and, where applicable, state income tax purposes.

25. Modification, Waiver or Termination. Except as otherwise expressly provided herein, no modification, waiver or termination of this Agreement, or any part hereof, shall be effective unless made in writing and signed by the Member.

26. Benefits of Agreement. None of the provisions of this Agreement shall be for the benefit of or enforceable by any creditor of the Company or of any other person not a party to this Agreement.

27. Headings. The titles of Sections of this Agreement are for convenience of reference only and shall not define or limit any of the provisions of this Agreement.

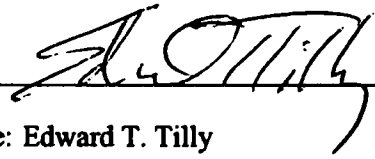
28. Severability. The invalidity or unenforceability of any particular provision of this Agreement shall be construed in all respects as if such invalid or unenforceable provision were omitted.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned, intending to be legally bound hereby, have duly executed this Third Amended and Restated Limited Liability Company Operating Agreement of Hanweck Associates, LLC as of the date first written above.

THE COMPANY:

HANWECK ASSOCIATES, LLC

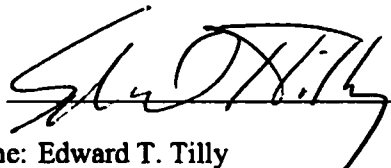
By: 

Name: Edward T. Tilly

Title: President and Chief Executive Officer

MEMBER:

CBOE GLOBAL MARKETS, INC.

By: 

Name: Edward T. Tilly

Title: President and Chief Executive Officer

QQ Hanweck Associates Pt. Ltd.

THE COMPANIES ACT (CAP. 50)

PRIVATE COMPANY LIMITED BY SHARES

CONSTITUTION

OF

HANWECK ASSOCIATES PTE. LTD.

INCORPORATED ON THE 30th DAY OF MAY 2019

**LODGED IN THE OFFICE OF
THE ACCOUNTING AND CORPORATE REGULATORY
AUTHORITY OF SINGAPORE**

THE COMPANIES ACT (CAP. 50)
PRIVATE COMPANY LIMITED BY SHARES
CONSTITUTION
OF
HANWECK ASSOCIATES PTE. LTD.
(the "Company")

FIRST SCHEDULE

1. The regulations in the First Schedule to the Companies (Model Constitutions) Regulations 2015 shall not apply to the Company except insofar as the same are repeated or contained in these regulations.

INTERPRETATION

2. In these regulations the words standing in the first column of the Table next hereinafter contained shall bear the meanings set opposite to them respectively in the second column thereof, if not inconsistent with the subject or context :-

WORDS	MEANINGS
the Act	- means the Companies Act (Cap. 50) as amended or modified from time to time;
regulations	- means these regulations as originally framed or as altered from time to time by Special Resolution;
the Directors, or the Board	- means the Directors for the time being of the Company as a body or a quorum of the Directors present at a meeting of the Directors;
the Electronic Register of Members	- means the electronic register of members kept and maintained by the Registrar for private companies under Section 196A of the Act;
Member	- means any registered holder of shares in the Company, except that, where the Act or applicable law requires, excludes the Company where it is a member by reason of its holding of its shares as treasury shares;
month	- means a calendar month;
the Office	- means the registered office for the time being of the Company;
the Seal	- means the Common Seal of the Company;

- the Secretary - means any person appointed to perform the duties of a secretary of the Company and includes a Deputy Secretary or an Assistant Secretary;
- the Statutes - means the Act and every other legislation for the time being in force concerning companies and affecting the Company;

Expressions referring to writing shall, unless the contrary intention appears, be construed as including references to printing, lithography, photography, and other modes of representing or reproducing words, symbols or other information which may be displayed in a visible form, whether in a physical document or in an electronic communication or form or otherwise howsoever.

Words denoting the singular shall include the plural and vice versa. Words denoting the masculine gender only shall include the feminine gender. Words denoting persons shall include corporations.

The marginal notes in these regulations are inserted for convenience and reference only and are in no way designed to limit or circumscribe the scope of these regulations.

Subject as aforesaid, any words or expressions defined in the Statutes shall, except where the context otherwise requires, bear the same meanings in these regulations.

NAME

3. **Name** : The name of the Company is "Hanweck Associates Pte. Ltd."

REGISTERED OFFICE

4. **Registered Office** : The registered office of the Company will be situated in the Republic of Singapore.

BUSINESS OR ACTIVITY

5. **Business or Activity** : Subject to the provisions of the Act and any other written law and this Constitution, the Company has:
- (a) Full capacity to carry on or undertake any business or activity, do any act or enter into any transaction; and
 - (b) Full rights, powers and privileges necessary to do the matters set out in paragraph (a) above.

LIABILITY OF MEMBERS

6. **Liability of Members** : The liability of the Members is limited.

PRIVATE COMPANY

7. **Private Company**: The Company is a private company, and accordingly

(a) no invitation shall be issued to the public to subscribe for any shares or debentures of the Company;

(b) the number of the Members of the Company (counting joint holders of shares as one person and not counting any person in the employment of the Company or of its subsidiary or any person who while previously in the employment of the Company or its subsidiary was and hereafter has continued to be a Member of the Company) shall be limited to fifty; and.

(c) the right to transfer the shares of the Company shall be restricted in the manner hereinafter appearing.

SHARES

8. **How shares are to be issued:** The shares taken by the subscribers to the Constitution shall be duly issued by the Directors. Subject to the Act, no shares may be issued by the Directors without the prior approval of the Company in General Meeting but subject thereto and to the provisions of this Constitution, the Directors may allot or grant options over or otherwise dispose of the same to such persons on such terms and conditions (subject to the provisions of the Act) and at such time as the Company in General Meeting may approve. -

9. **Company may acquire its own issued shares :** The Company may, subject to and in accordance with the Act, purchase or otherwise acquire its issued shares on such terms and in such manner as the Company may from time to time think fit. If required by the Act, any share which is so purchased or acquired by the Company shall, unless held in treasury in accordance with the Act, be deemed to be cancelled immediately on purchase or acquisition by the Company. On the cancellation of any share as aforesaid, the rights and privileges attached to that share shall expire. In any other instance, the Company may hold or deal with any such share which is so purchased or acquired by it in such manner as may be permitted by, and in accordance with, the Act.

10. **Special Rights:** The rights attached to shares issued upon special conditions shall be clearly defined in the Constitution. Without prejudice to any special right previously conferred on holders of any existing shares or class of shares but subject to the Act and this Constitution, shares in the Company may be issued by the Directors and any such shares may be issued with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as the Directors, subject to any ordinary resolution of the Company, determine.

11. **Treasury Shares:** The Company shall not exercise any right in respect of treasury shares other than as provided by the Act or otherwise by applicable law. Subject thereto, the Company may hold or deal with its treasury shares in the manner authorised by, or prescribed pursuant to, the Act or otherwise by applicable law

12. **Power to pay commission:** The Company may pay commissions or brokerage on any issue of shares at such rate or amount and in such manner as the Directors may deem fit. Such commissions or brokerage may be satisfied by the payment of cash or the allotment of fully or partially paid shares or partly in one way and partly in the other.

13. **Exclusion of equities:** No person shall be recognised by the Company as holding any share upon any trust, and the Company shall not be bound in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share, or (except only as by these regulations or by law otherwise provided) any other right in respect of any share, except an absolute right to the entirety thereof in the registered holder.

SHARE CERTIFICATE

14. **Entitlement to share certificate:** Every Member shall be entitled without payment to receive within two months after allotment or within one month after lodgement of transfer (or within such period as the conditions of issue shall provide) one certificate in respect of each class of shares held by him for all his shares of that class or several certificates each for one or more of his shares of that class upon payment of \$1.00 (or such less sum as the Directors shall from time to time determine) for every certificate after the first; Provided Always That (i) the Company shall

not be bound to issue more than one certificate in respect of a share held jointly by several persons and delivery thereof to one of several joint holders shall be sufficient delivery to all such holders and (ii) a Member who has transferred part of his shares comprised in a share certificate shall be entitled to receive without payment and within one month after lodgement of the transfer of the shares transferred a certificate in respect of the shares not transferred.

15. **Form of share certificates:** Every certificate for shares shall be under the Seal or a Share Seal in accordance with these regulations and the Act. Every certificate for shares shall specify the number and class of shares to which it relates and the amount (if any) unpaid on the shares and/or such other information as may be prescribed by the Act and/or other applicable law.

16. **Replacement of certificate:** If any such certificate shall be worn out, defaced, destroyed or lost it may be renewed on such evidence being produced as the Directors shall require and in the case of wearing out or defacement on delivery of the old certificate and in the case of destruction or loss of execution of such indemnity (if any) and in either case on payment of such sum not exceeding \$2.00 as the Directors may from time to time require. In the case of destruction or loss the Member to whom such renewed certificate is given shall also bear the loss and pay to the Company all expenses incidental to the investigations by the Company of the evidence of such destruction or loss and to such indemnity.

JOINT HOLDERS OF SHARES

17. **Rights and liabilities of joint holders:** Where two or more persons are registered as the holders of any share, they shall be deemed to hold the same as joint tenants with benefit of survivorship subject to the following provisions:-

- (a) The Company shall not be bound to register more than two persons as the holders of any share, except in the case of executors or trustees of a deceased shareholder.
- (b) The joint holders of a share shall be liable severally as well as jointly in respect of all payments which ought to be made in respect of such share.
- (c) On the death of any one of such joint holders the survivor or survivors shall be the only person or persons recognised by the Company as having any title to such share but the Directors may require such evidence of death as they may deem fit.
- (d) Any one of such joint holders may give effectual receipts for any dividend, bonus or return of capital payable to such joint holders.
- (e) Only the person whose name stands first in the Electronic Register of Members as one of the joint holders of any share shall be entitled to delivery of the certificate relating to such share or to receive notices from the Company and to vote in respect of such share at meetings and any notice given to such person shall be deemed notice to all the joint holders.

LIEN ON SHARES

18. **Company's lien on shares:** The Company shall have a first and paramount lien on all the shares not fully paid up registered in the name of a Member (whether solely or jointly with others) for all moneys due to the Company from him or his estate either alone or jointly with any other person, whether a Member or not, and whether such moneys are presently payable or not. The Company's lien (if any) on a share shall extend to all dividends payable thereon. The Directors may at any time declare any share to be exempt, wholly or partially, from the provisions of this regulation.

19. **Sale of shares subject to lien:** For the purpose of enforcing such lien the Directors may sell all or any of the shares subject thereto in such manner as they think fit, but no sale shall be made until such time as the moneys in respect of which such lien exists or some part thereof are or is presently payable and until a notice in writing stating the amount due and demanding payment and giving notice of intention to sell in default, shall have been served in such a manner as the Directors shall think fit on such Member or the person (if any) entitled by transmission to the shares, and default in payment shall have been made by him or them for seven days after such notice.

20. **Application of proceeds:** The net proceeds of any such sale shall be applied in or towards satisfaction of the amount due and the residue (if any) shall be paid to the Members or the person (if any) entitled by transmission to the shares.

21. **Rights of purchaser of such shares:** To give effect to any such sale the Directors may authorise some person to transfer the shares sold to the purchaser and subject to regulations 32 and 33, the Company must lodge a notice of transfer of shares in relation to the shares sold to the purchaser with the Registrar and the purchaser shall not be bound to see to the regularity or validity of or be affected by any irregularity or invalidity in the proceedings or be bound to see to the application of the purchase money and after the Company lodges the notice of transfer of shares with the Registrar, the validity of the sale shall not be impeached by any person and the remedy of any person aggrieved by the sale shall be in damages only and against the Company exclusively.

CALLS ON SHARES

22. **Calls on shares:** The Directors may from time to time make calls upon the Members in respect of any moneys unpaid on their shares or on any class of their shares and not by the conditions of allotment thereof made payable at fixed times; and each Member shall (subject to his having been given at least fourteen days' notice specifying the time or times and place of payment) pay to the Company at the time or times and place so specified the amount called on his shares. A call may be made payable by instalments. A call may be revoked or postponed as the Directors may determine. A call shall be deemed to have been made at the time when the resolution of the Directors authorising the call was passed.

23. **Liability of joint holders:** The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.

24. **Interest on calls:** If before or on the day appointed for payment thereof a call payable in respect of a share is not paid, the person from whom the amount of the call is due shall pay interest on such amount at the rate of 8% per annum from the day appointed for payment thereof to the time of actual payment, and shall also pay all costs, charges and expenses which the Company may have incurred or become liable for in order to procure payment of or in consequence of the non-payment of such call or instalment, but the Directors shall be at liberty to waive payment of such interest, costs, charges and expenses wholly or in part.

25. **Rights of Members suspended until all calls are duly paid:** No shareholder shall be entitled to receive any dividend or to be present or vote at any meeting or upon a poll, or to exercise any privilege as a Member until he shall have paid all calls for the time being due and payable on every share held by him, whether alone or jointly with any other person, together with interest and expenses (if any).

26. **Power of Directors to differentiate calls:** The Directors may from time to time make arrangements on the issue of shares for a difference between the holders of such shares in the amount of calls to be paid and in the time of payment of such calls.

27. **Payment in advance of calls:** The Directors may if they think fit receive from any shareholder willing to advance the same all or any part of the moneys due upon his shares beyond the sums actually called up thereon and upon all or any of the moneys so advanced the Directors may (until the same would but for such advance become presently payable) pay or allow such interest as may be agreed upon between them and such shareholder in addition to the dividend

payable upon such part of the share in respect of which such advance has been made as is actually called up.

RESTRICTION ON TRANSFER OF SHARES

28. **Form of transfer:** Subject to the restrictions of these regulations any Member may transfer all or any of his shares, but every transfer must be in writing and in the usual common form, or in any other form which the Directors may approve, and must be left at the Office for registration, accompanied by the certificate of the shares to be transferred, and such other evidence (if any) as the Directors may require to prove the title of the intending transferor, or his right to transfer the shares.

29. **Execution of transfers:** The instrument of transfer of any share shall be signed both by the transferor and by the transferee, and the transferor shall be deemed to remain the holder of the share until the name of the transferee is entered in the Electronic Register of Members in respect thereof.

30. **Retention of instrument of transfer:** All instruments of transfer which shall be registered shall be retained by the Company, but any instrument of transfer which the Directors may refuse to register shall (except in any case of fraud) be returned to the party presenting the same.

31. **Persons under disability:** No share shall in any circumstances be transferred to bankrupt or person who is mentally disordered.

32.(1) **Directors' right to decline to accept transfer:** Subject to the Act or such other applicable law, the Directors may in their absolute discretion refuse to lodge with the Registrar a notice of transfer of any share and shall not be bound to give any reason for such refusal or specify the grounds upon which any transfer is declined. The Directors may refuse to lodge with the Registrar a notice of transfer of any share if (a) the share has not been fully paid or is subject to a lien; or (b) any transfer which might cause the number of Members to exceed the limit prescribed by regulation 7; or (c) if the provisions of these regulations relating to the transfer of shares have not been complied with.

(2) The Directors may decline to recognise any instrument of transfer unless :-

- (a) a fee not exceeding \$1.00 is paid to the Company in respect thereof; and
- (b) the instrument of transfer is accompanied by the certificate of the shares to which it relates and such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer.

33. **Notice of refusal:** If the Directors refuse to lodge with the Registrar a notice of transfer of any shares, they shall within one month after the date on which the transfer was lodged with the Company send to the transferor and to the transferee notice of the refusal, as required by the Act or otherwise by applicable law.

34. **Register of Transfer:** The Company shall provide a book to be called "Register of Transfers", which shall be kept by the Secretary under the control of the Directors, and in which shall be entered the particulars of every transfer or transmission of every share.

35. **Register of Transfers may be closed:** The Register of Transfers may be closed during the fourteen days immediately preceding every annual general meeting of the Company and at such other times (if any) and for such period as the Directors may from time to time determine; Provided Always That it shall not be closed for more than thirty days in any year and during such periods the Directors may suspend the lodging of any notice of transfer of shares with the Registrar.

TRANSMISSION OF SHARES

36. **Transmission on death:** In the case of the death of a Member, the survivors or survivor where the deceased was a joint holder, and the legal personal representatives of the deceased where he was a sole or only surviving holder, shall be the only persons recognised by the Company as having any title to his shares, but nothing herein contained shall release the estate of a deceased holder from any liability in respect of any share solely or jointly held by him.

37. **Rights of persons becoming entitled as a result of a Member's death or bankruptcy:** Any person becoming entitled to a share in consequence of the death or bankruptcy of a Member shall upon producing such evidence of his title as the Directors may require, have the right either to be registered himself as the holder of the share or to make such transfer thereof as the deceased or bankrupt Member could have made, but the Directors shall in either case have the same right to refuse or suspend registration as they would have had in the case of a transfer of the share by the deceased or bankrupt Member before the death or bankruptcy.

38. **Rights of persons becoming entitled:** A person becoming entitled to a share in consequence of the death or bankruptcy of any Member shall have the right to receive and give a discharge for any dividends or other moneys payable in respect of the share, but he shall have no right to receive notice of or to attend or vote at meetings of the Company, or (save as aforesaid) to any of the rights or privileges of a Member in respect of the share, unless and until he shall be registered as the holder thereof; Provided Always That the Directors may at any time give notice requiring any such person to elect either to be registered himself or to transfer the share, and if the notice is not complied with within ninety days the Directors may thereafter withhold payment of all dividends or other moneys payable in respect of the share until the requirements of the notice have been complied with.

FORFEITURE OF SHARES

39.(1) **Notice requiring payment of calls:** If a Member fails to pay the whole or any part of any call or instalment of a call on the day appointed for payment thereof, the Directors may, at any time thereafter during such time as any part of the call or instalment remains unpaid, serve a notice on him requiring payment of such call or instalment as is unpaid, together with any interest and expenses which may have accrued by reason of such non-payment.

(2) **Notice requiring payment to state time and place:** The notice shall name a further day (not earlier than the expiration of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made. It shall also name the place where payment is to be made and shall state that, in the event of non-payment at or before the time appointed, the shares in respect of which the call was made will be liable to be forfeited.

40. **Forfeiture on non-compliance with notice:** If the requirements of any such notice as aforesaid are not complied with any share in respect of which the notice has been given may at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Directors to that effect.

41. **Forfeiture of shares shall include dividends:** A forfeiture of shares shall include all declared dividends in respect of the forfeited shares and not paid before the forfeiture.

42.(1) **Sale or disposition of forfeited shares:** A forfeited share may be sold, re-allotted or otherwise disposed of on such terms and in such manner as the Directors think fit and at any time before a sale or disposition the forfeiture may be cancelled on such terms as the Directors think fit.

(2) **Powers of Company on disposition of forfeited shares:** Any share so forfeited shall be deemed to be the property of the Company. The Company may receive the consideration, if any, given for the share on any sale or disposition thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed and he shall thereupon be registered as the holder of the share and shall not be bound to see to the application of the purchase money,

if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in the reference to the forfeiture, sale or disposal of the share.

43. Rights and liabilities of persons whose shares have been forfeited: A person whose shares have been forfeited shall cease to be a Member in respect of the forfeited shares, but shall, notwithstanding, remain liable to pay to the Company all moneys which at the date of forfeiture were payable by him to the Company in respect of shares; but his liability shall cease if and when the Company shall have received payment in full of all such moneys in respect of the shares.

44. Notice of forfeiture to be entered in the Electronic Register of Members: Notice of any forfeiture shall be given to the holder of the share forfeited or to the person entitled by transmission to the share forfeited as the case may be. An entry of the forfeiture with the date thereof shall be made in the Electronic Register of Members opposite to the share. The provisions of this regulation are directory only, and no forfeiture shall be in any manner invalidated by any omission to give such notice or to make such entry as aforesaid.

45. Directors may allow forfeited share to be redeemed: Notwithstanding any such forfeiture as aforesaid, the Directors may, at any time before the forfeited share has been otherwise disposed of, annul the forfeiture, upon the terms of payment of all calls and interest due thereon and all expenses incurred in respect of the share and upon such further terms (if any) as they shall see fit.

46. Consequences of forfeiture: The forfeiture of a share shall involve the extinction at the time of forfeiture of all interest in and all claims and demands against the Company in respect of the share, and all other rights and liabilities incidental to the share as between the shareholder whose share is forfeited and the Company, except only such of those rights and liabilities as are by these regulations expressly saved, or as are by the Act or otherwise by applicable law given or imposed in the case of past members.

47. Title to forfeited shares: A statutory declaration in writing that the declarant is a Director or the Secretary of the Company and that a share in the Company has been duly forfeited on a date stated in the declaration shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share.

CONVERSION OF SHARES INTO STOCK

48. Power to convert to stock: The Company in general meeting may convert any paid-up shares into stock and may from time to time reconvert such stock into paid-up shares.

49. Transfer of stock: When any shares have been converted into stock the several holders of such stock may transfer their respective interests therein or any part of such interests in such manner as the Company in general meeting shall direct, but in default of any such direction then in the same manner and subject to the same regulations as and subject to which the shares from which the stock arose might previously to conversion have been transferred or as near thereto as circumstances will admit. But the Directors may if they think fit from time to time fix the minimum amount of stock transferable.

50. Rights of stockholders: The several holders of stock shall be entitled to participate in the dividends and profits of the Company according to the amount of their respective interests in such stock and such interests shall, in proportion to the amount thereof, confer on the holders thereof respectively the same privileges and advantages for the purpose of voting at meetings of the Company and for other purposes as if they held the shares from which the stock arose, but so that none of such privileges or advantages, except the participation in the dividends, profits and assets of the Company, shall be conferred by any such aliquot part of consolidated stock as would not, if existing in shares, have conferred such privileges or advantages.

51. **Interpretation:** All such provisions of the regulations as are applicable to paid up shares shall apply to stock and in all such provisions the words "share" and "shareholder" shall include "stock" and "stockholder".

ALTERATION OF CAPITAL

52.(1) **Rights and privileges of new shares:** Subject to any special rights for the time being attached to any existing class of shares, any new shares in the Company shall be issued upon such terms and conditions and with such rights and privileges annexed thereto as the general meeting resolving upon the creation thereof shall direct, and if no direction be given as the Directors shall determine subject to the provision of these regulations and in particular (but without prejudice to the foregoing), such new shares may be issued with a preferential or qualified right to dividends and in the distribution of the assets of the Company and with a special or restricted right of voting.

(2) Subject to the Act or such other applicable law, any preference shares may, with the sanction of an Ordinary Resolution, be issued on the terms that they are, or at the option of the Company are liable to be redeemed.

53. **Disposal of new shares:** Subject to the Act or such other applicable law and to other provisions of these regulations, any new shares issued shall be at the disposal of the Directors who may allot, grant options over or otherwise dispose of them to such persons at such times and for such consideration and upon such terms and conditions as the Directors may determine.

54. **New shares otherwise subject to provisions of regulations:** Subject to any directions that may be given in accordance with the powers contained in the Constitution, all new shares shall be subject to the provisions of these regulations with reference to allotments, payment of calls, transfer, transmission, forfeiture, lien and otherwise as if it had been part of the original capital.

55.(1) **Company may alter its capital in certain ways:** The Company may by Ordinary Resolution alter its share capital in any way permitted by law and/or the Act including (without limitation) :-

- (a) consolidate and divide all or any of its shares;
- (b) convert all or any of its paid-up shares into stock and reconvert that stock into paid-up shares;
- (c) cancel any shares which at the date of the passing of the Resolution have not been taken or agreed to be taken by any person or which have been forfeited and diminish the amount of its share capital by the amount of the shares so cancelled;
- (d) subdivide shares or any of them, subject to the provisions of Section 71(1)(d) of the Act or such other applicable law, so that as between the holders of the resulting shares one or more of such shares may by the resolution by which the subdivision is effected be given any preference or advantage as regards dividend, capital, voting or otherwise over the others or any other of such shares; and
- (e) subject to the provisions of these regulations and the Act or otherwise by applicable law, convert any class of shares into any other class of shares.

(2) The Company may by Special Resolution reduce its share capital in any manner and with and subject to any condition authorised and consent required by law. Without prejudice to the generality of the foregoing, upon cancellation of a share purchased or otherwise acquired by the Company pursuant to these regulations and the Act or such other applicable law, the number of issued shares of the Company shall be diminished by the number of the shares so cancelled, and, where any such cancelled share was purchased or acquired out of the capital of the Company, the amount of share capital of the Company shall be reduced accordingly.

(3) Anything done in pursuance of this regulation shall be done in manner provided and subject to any conditions imposed by the Act or otherwise by applicable law or so far as the Act or such law is not applicable, in accordance with the terms of the resolution authorising the same or, if such resolution is not applicable, in such manner as the Directors deem most expedient.

MODIFICATION OF CLASS RIGHTS

56. **Modification of Class rights:** Subject to the provisions of the Act or such other applicable law, all or any of the rights, privileges or conditions attached to any class of shares in the capital of the Company for the time being may, at any time, as well before as during liquidation, be modified, varied, altered or abrogated, either with the consent in writing of the holders of not less than three-fourths of the issued shares of the class, or with the sanction of Special Resolution passed at a separate general meeting of the holders of shares of the class, and all the provisions contained in these regulations relating to general meetings shall mutatis mutandis apply to every such meeting, but so that the quorum thereof, where there is more than one member, shall be not less than two persons personally present and holding or representing by proxy one-quarter of the issued shares of the class, and that any holder of shares of the class, present in person or by proxy, shall on a poll be entitled to one vote for each share of the class held by him, and if at any adjourned meeting of such holders such quorum as aforesaid is not present, any two holders of shares of the class who are personally present shall be a quorum.

GENERAL MEETINGS

57. **Annual General Meeting:** The Company shall hold an Annual General Meeting in accordance to the Act or such other applicable law. The annual general meeting shall be held at such time and place as the Directors shall appoint. All general meetings other than annual general meetings shall be called extraordinary general meetings. Notwithstanding the foregoing, the Company shall be entitled, subject to compliance with the Act or otherwise by applicable law, to dispense with annual general meetings.

58. **Extraordinary General Meeting:** The Directors may whenever they think fit convene an extraordinary general meeting and an extraordinary general meeting shall also be convened on such requisition or in default may be convened by such requisitionist as provided for by Section 176 of the Act or such other applicable law.

59. **Time and place of meeting:** The time and place of any meeting shall be determined by the convenors of the meeting.

NOTICE OF GENERAL MEETINGS

60.(1) **Notices of Meeting:** Subject to the provisions of the Act or such other applicable law relating to Special Resolutions, special notice and agreements for shorter notice, fourteen days' notice at the least shall be given in the manner hereinafter mentioned to such persons as are under the provisions of these regulations entitled to receive notices of general meetings from the Company, but with the consent of all persons for the time being entitled as aforesaid, a meeting may be convened in such manner as such persons may approve.

(2) **Period and form of notice of Meeting:** The notice shall be exclusive of the day on which it is served or deemed to be served but inclusive of the day for which it is given and shall specify the place, the day and the hour of meeting and in case of special business the general nature of the business.

(3) **Notice of Special Resolution:** The notice convening a meeting to consider a Special Resolution shall specify the intention to propose the resolution as a Special Resolution.

61.(1) **Persons who should be given notice:** Notice of every general meeting shall be given in any manner authorised by these regulations to :-

- (a) every Member holding shares conferring the right to attend and vote at the meeting who at the time of the convening of the meeting shall have paid all calls or other sums presently payable by him in respect of shares in the Company;
- (b) the Directors (including Alternate Directors) of the Company; and
- (c) the Auditors of the Company.

(2) **Accidental omission to give notice:** The accidental omission to give notice of a meeting to or the non-receipt of notice of a meeting by any person entitled to receive notice shall not invalidate the proceedings at the meeting.

PROCEEDINGS AT GENERAL MEETINGS

62. **Special business:** All business shall be deemed special that is transacted at an extraordinary general meeting and also all that is transacted at an annual general meeting with the exception of the consideration of the accounts, financial statements and reports (if any) of the Directors and Auditors, the fixing of the remuneration of Directors, the election of Directors in the place of those retiring, the declaration of dividends and the appointment of and the fixing of the remuneration of the Auditors.

63.(1). **Meeting of Members/Quorum:** Where there is more than one member, no business shall be transacted at any general meeting unless a quorum of Members is present at the time when the meeting proceeds to business. Except as herein otherwise provided, two Members shall form a quorum. For the purposes of this regulation, but subject to the definition of "Member" in regulation 2, "Member" includes a person attending as a proxy and a corporation being a Member shall be deemed to be personally present if represented in accordance with the provisions of regulation 79.

(2) The Members may meet together either in person or by telephone, radio, conference television or any other form of audio or audio-visual instantaneous communication by which all persons participating in the meeting are able to hear and be heard by all other participants. A resolution passed by such a conference shall, notwithstanding that the Members are not present together at one place at the time of conference, be deemed to have been passed at a meeting of the Members held on the day and at the time at which the conference was held and shall be deemed to have been held at the registered office of the Company, unless otherwise agreed, and all Members participating at that meeting shall be deemed for all purposes of these regulations to be present at that meeting.

(3) In case of a meeting which is not held in person, the fact that a Member is taking part in the meeting must be made known to all the other Members taking part, and no Member may disconnect or cease to take part in the meeting unless he makes known to all other Members taking part that he is ceasing to take part in the meeting. Until a Member makes it known that he is ceasing to take part in the meeting, he is deemed to continue to form part of the quorum.

64. **Adjournment if quorum is not present:** If within half an hour from the time appointed for the holding of a general meeting a quorum is not present, the meeting if convened on the requisition of Members shall be dissolved. In any other case it shall stand adjourned to the same day in the next week at the same time and place or to such other day and at such other time and place as the Directors may determine.

65. **Chairman:** The Chairman (if any) of the Board shall preside as Chairman at every general meeting, but if there be no such Chairman, or if at any meeting he shall not be present within fifteen minutes after the time appointed for holding the same, or shall be unwilling to act as Chairman, the Members present shall choose some director, or if no Director be present, or if all the Directors present decline to take the chair one of themselves to be Chairman of the meeting.

66. **Adjournment:** The Chairman of the meeting may, with the consent of any meeting at which a quorum is present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid it shall not be necessary to give notice of an adjournment or of the business to be transacted at an adjourned meeting.

67. **Method of voting:** At every general meeting a resolution put to the vote of the meeting shall be decided on a show of hands by the Members entitled to vote and present in person or by proxy, unless before or upon the declaration of the result of the show of hands a poll be demanded by :-

- (a) the Chairman of the meeting; or
- (b) at least two Members present in person or by proxy, and entitled to vote at the meeting; or
- (c) any Member or Members present in person or by proxy and representing not less than five per cent (5%) of the total voting rights of all Members having the right to vote at the meeting; or
- (d) any Member or Members holding shares in the Company conferring a right to vote at the meeting being shares on which an aggregate sum has been paid up equal to not less than five per cent (5%) of the total number of paid-up shares of the Company (excluding treasury shares).

Unless a poll be so demanded, a declaration by the Chairman of the meeting that a resolution has been carried, or has been carried by a particular majority, or lost, or not carried by a particular majority, shall be conclusive, and an entry to that effect in the book of proceedings of the Company shall be conclusive evidence thereof, without proof of the number or proportion of the votes recorded in favour of or against such resolution.

68. **Chairman to have casting vote:** In the case of an equality of votes whether on a show of hands or on a poll as aforesaid, the Chairman shall be entitled to a second or casting vote in addition to the vote or votes to which he may be entitled as a Member.

69. **Taking a poll:** If a poll is demanded as aforesaid it shall be taken in such manner and at such time and place as the Chairman of the meeting directs and either at once or after an interval or adjournment or otherwise and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded. The demand for a poll may be withdrawn. In case of any dispute as to the admission or rejection of a vote the Chairman shall determine the same and such determination made in good faith shall be final and conclusive.

70. **Other business to continue if poll demanded:** The demand of a poll shall not prevent the continuance of a meeting for the transaction of any business other than the question on which a poll has been demanded.

71. **No poll in certain cases:** No poll shall be demanded on the election of a Chairman of a meeting and a poll demanded on a question of adjournment shall be taken at the meeting and without adjournment.

72. **Errors in counting votes:** If at any general meeting any votes shall be counted which ought not to have been counted or might have been rejected, the error shall not vitiate the result of the voting unless it be pointed out at the same meeting, and be of sufficient magnitude to vitiate the result of the voting.

73.(1) **Resolution by written means:** Notwithstanding any other provision of these regulations but subject to the provisions of the Act or such other applicable law, the Company may pass any resolution of its Members by written means. For the purpose of this Regulation, the

expression "by written means" shall include approval by telefax, telex, cable, telegram or any form of electronic communication approved by the Directors for such purpose from time to time incorporating, if the Directors deem necessary, the use of security and/or identification procedures and devices approved by the Directors. If within 28 days after the text of the resolution has been sent or made accessible to the Members, the requisite number of Members have given the Company their formal agreement to the resolution in accordance with the Act (and in particular Section 184A(5) of the Act) or otherwise by applicable law, then the resolution shall be deemed passed in accordance with the said provisions of the Act or such applicable law and failing the receipt of such formal agreement by the Company within the stipulated period, the resolution shall be deemed not to have been passed.

(2) Any reference in these regulations to the doing of anything at a general meeting of the Company, the passing or making of a resolution, or the passing or making of a resolution at a meeting, includes a reference to the passing of the resolution by written means in accordance with this regulation.

VOTES OF MEMBERS

74. **Voting rights of Members:** Subject and without prejudice to any special privileges or restrictions as to voting for the time being attached to any special class of shares for the time being forming part of the capital of the Company, every Member present in person or by proxy shall have one vote and upon a poll every such member shall have one vote for every share held by him.

75. **Voting rights of mentally disordered Member:** A Member who is mentally disordered may vote by his committee, curator bonis or other legal curator and such last mentioned persons may give their votes by proxy but no person claiming to vote pursuant to this regulation shall do so unless such evidence as the Directors may require of his authority shall have been deposited at the Office not less than seventy-two hours before the time for holding the meeting at which he wishes to vote.

76. **Voting rights of joint-holders of shares:** If two or more persons are jointly entitled to a share then in voting upon any question, the vote of a senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other registered holders of the share and for this purpose seniority shall be determined by the order in which the names stand in the Electronic Register of Members.

77. **Right to vote:** Save as herein expressly provided, no person other than a Member duly registered and who shall have paid everything for the time being due from him and payable to the Company in respect of his shares shall be entitled to be present or to vote on any question, either personally or by proxy or attorney or representative or to be reckoned in a quorum at any general meeting. A proxy need not be a Member of the Company.

78. **Corporations acting by representatives:** Any corporation which is a Member of the Company may, by resolution of its directors or other governing body, authorise any person to act as its representative at any meetings of the Company; and such representative shall be entitled to exercise the same powers on behalf of the corporation which he represents as if he had been an individual shareholder.

79.(1) **Form of instrument appointing proxy:** An instrument appointing a proxy shall be in writing in the common form or in any other form which the Directors shall approve, under the hand of the appointor or his attorney duly authorised in writing or, if the appointor is a corporation, either under seal or in some other manner approved by the Directors.

(2) Where it is desired to afford Members an opportunity of voting for or against a resolution the instrument appointing a proxy shall be in the following form or a form as near thereto as circumstances admit:

87.(1) Declaration of Directors' interest in transactions with Company: A Director who is in any way either directly or indirectly interested in a transaction or proposed transaction with the Company shall declare the nature of his interest at a meeting of the Directors in accordance with Section 156 of the Act or such other applicable law. Subject to such disclosure, a Director shall be entitled to vote in respect of any transaction or arrangement in which he is interested and he shall be taken into account in ascertaining whether a quorum is present.

(2) **Declaration of Directors' conflict of interest:** A Director who holds any office or possesses any property whereby whether directly or indirectly duties or interests might be created in conflict with his duties or interests as Director shall declare the fact and the nature, character and extent of conflict at a meeting of the Directors of the Company in accordance with the Act or otherwise by applicable law.

(3) **Power of Director to hold office of profit and to transact with Company:** No Director or intending Director shall be disqualified by his office from entering into any transaction or arrangement with the Company, either with regard to his tenure of any such office or place of profit or as vendor, purchaser, lessor, lessee, mortgagor, mortgagee, manager, agent, broker or otherwise, and no such transaction or arrangement, nor any transaction or arrangement entered into by or on behalf of the Company with any person, firm or company in which any Director shall be in any way interested, shall be avoided nor shall any Director so transacting or being so interested be liable to account to the Company for any profit realised by any such transaction or arrangement by reason of such Director holding such office, or of the fiduciary relationship thereby established; Provided Always That he has complied with the requirements of Section 156 or such other applicable law as to disclosure.

(4) **Holding of office in other companies:** A Director of the Company may become or continue to be a director or other officer of or otherwise be interested in any company whether or not the Company is interested as a shareholder or otherwise and no such Director shall be accountable to the Company for any remuneration or other benefits received by him as a director or officer of or from his interests in such other company unless the Company otherwise directs.

88. **Directors shall keep Registers:** The Directors shall keep Registers as required by the Act or otherwise by applicable law.

89.(1) **Directors' fees:** The fees of the Directors shall from time to time be determined by the Company in general meeting and such fees shall not be increased except pursuant to an Ordinary Resolution passed at a general meeting where notice of the proposed increase shall have been given in the notice convening the Meeting. Such fees shall be divided among the Directors in such proportions and manner as they may agree and in default of agreement equally, except that in the latter event any Director who shall hold office for part only of the period in respect of which such fees is payable shall be entitled only to rank in such division for the proportion of fee related to the period during which he has held office.

(2) **Extra remuneration:** Any Director who is appointed to any executive office or serves on any committee or who otherwise performs or renders services which, in the opinion of the Directors, are outside his ordinary duties as a Director, may be paid such remuneration as the Directors may determine.

(3) **Expenses:** The Directors may be entitled to be repaid all travelling or such reasonable expenses as may be incurred in attending and returning from meetings of the Directors or of any committee of the Directors or general meetings of the Company or otherwise howsoever in or about the business of the Company in the course of the performance of their duties as Directors.

90.(1) **Removal and Appointment of Directors by the Company:** The Company may by Ordinary Resolution remove any Director from office notwithstanding anything in these regulations or in any agreement between the Company and such Director. Such removal shall be without prejudice to any claim such Director may have for damages for breach of any contract of service between him and the Company.

(2) The Company may by Ordinary Resolution appoint another person in place of a Director removed from office under the provisions of regulation 90(1).

91. **Vacation of office of Director:** The office of a Director shall be vacated:-

- (a) If he becomes a bankrupt or he makes any arrangement or composition with his creditors generally.

- (b) If he becomes of unsound mind or a person whose person or estate is liable to be dealt with in any way under the law relating to mental disorder.
- (c) If, subject to the Act or such other applicable law, by notice in writing to the Company, he resigns his office.
- (d) If he is prohibited from being a Director by an order made under Section 149 or 154 of the Act or such other applicable law.
- (e) If he is removed from office pursuant to a notice given under the provisions of regulation 90(1).
- (f) If he ceases to be a Director by virtue of Section 147 of the Act or such other applicable law.

MANAGING DIRECTOR

92. **Appointment of Managing Director:** The Directors may from time to time and at any time appoint one or more of their body to be Managing Director or Managing Directors upon such terms as they may think fit. He shall, subject to the provisions of any contract between him and the Company, be subject to the same provisions as to resignation and removal as the other Directors of the Company, and if he ceases to hold the office of Director he shall ipso facto and immediately cease to be a Managing Director. A Managing Director shall at all times be subject to the control of the Directors.

93. **Managing Director's remuneration:** A Managing Director shall, subject to the terms of any agreement entered into in any particular case, receive such remuneration (whether by way of salary, commission or participation in profit, or partly in one way and partly in another) as the Directors may determine.

94. **Powers of Managing Director:** The Directors may entrust to and confer upon a Managing Director any of the powers exercisable by them upon such terms and conditions and with such restrictions as they may think fit, and either collaterally with or to the exclusion of their own powers, and may from time to time revoke, withdraw, alter, or vary all or any of those powers.

SECRETARY

95. **Appointment of Secretary:** The Secretary or Joint Secretaries shall be appointed by the Directors for such term at such remuneration and upon such conditions as they may think fit; and any Secretary or Joint Secretaries so appointed may be removed by them.

96.(1) **Same person cannot act as Director and Secretary:** A provision of the Act or such other applicable law or these regulations requiring or authorising a thing to be done by or to a Director and the Secretary shall not be satisfied by its being done by or to the same person acting as Director and as or in place of the Secretary.

(2) **Joint Secretaries:** A provision of the Act or such other applicable law or these regulations requiring or authorising a thing to be done by or to the Secretary shall be satisfied by its being done by or to one or more of the Joint Secretaries if any for the time being appointed by the Directors.

THE SEAL

97. **Affixing of Seal:** The Directors shall provide for the safe custody of the Seal which shall only be used by the authority of a resolution of the Directors or of a committee of the Directors authorised by the Directors in that behalf; and every instrument to which the Seal shall be affixed shall be signed by one Director and shall be countersigned by the Secretary or by a second Director or by some other person appointed by the Directors for the purpose.

98. **Power to have a Seal for use abroad:** The Company may exercise all the powers conferred by the Act or otherwise by applicable law to have an official seal for use abroad and such official seal shall be affixed by the authority and in the presence of and the instruments sealed therewith shall be signed by such persons as the Directors shall from time to time by writing under the Seal appoint. The Company may also have a Share Seal.

POWERS AND DUTIES OF DIRECTORS

99.(1) **Business of Company to be managed by the Directors:** The business of the Company shall be managed by or under the direction of the Directors.

(2) The Directors may exercise all the powers of the Company except any power that the Act or such other applicable law or the Constitution of the Company require the Company to exercise in general meeting.

100. **Directors' power to borrow:** The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking, property and uncalled capital or any part thereof and to issue debentures, debenture stock and other securities whether outright or as a security for any debt, liability or obligation of the Company or of any third party.

101. **Directors' powers to delegate to Committees:** The Directors may delegate any of their powers other than the powers to borrow and make calls to Committees consisting of such members of their body as they think fit. Any Committee so formed shall in the exercise of the power so delegated conform to any regulations that may from time to time be imposed upon them by the Board.

102. **Directors' power to appoint attorneys of the Company:** The Directors may, at any time, and from time to time, by power of attorney under the Seal, appoint any person to be the attorney of the Company for such purposes and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the Directors under these regulations), and for such period and subject to such conditions as the Directors may from time to time think fit, and such appointment may (if the Directors think fit) be made in favour of the Members or any of the members of any local board established as aforesaid, or in favour of any body corporate or of the members, directors, nominees or managers of any body corporate or unincorporate, or otherwise in favour of any fluctuating body of persons, whether nominated directly or indirectly by the Directors, and any such power of attorney may contain such powers for the protection or convenience of persons dealing with such attorney as the Directors may think fit.

103. **Director may authorise attorney to delegate his powers:** Any such delegate or attorney as aforesaid may be authorised by the Directors to sub-delegate all or any of the powers, authorities or discretions for the time being vested in him.

104. **Execution of negotiable instruments and receipts for money paid:** All cheques, promissory notes, drafts, bills of exchange and other negotiable or transferable instruments in which the Company is in any way concerned or interested and all receipts for moneys paid to the Company shall be signed, drawn, accepted, endorsed or otherwise executed as the case may be in such manner as the Directors shall from time to time by resolution determine.

105. **Directors' power to keep a Branch Register:** The Company may exercise the powers conferred upon the Company by Section 196 of the Act or such other applicable law with regard to the keeping of a Branch Register, and the Directors may (subject to the provisions of that Section or such applicable law) make and vary such regulations as they may think fit respecting the keeping of any such Register.

ALTERNATE DIRECTORS AND SUBSTITUTE DIRECTORS

106.(1) **Appointment of Alternate Director:** Any Director may from time to time and at any time by writing under his hand and deposited at the Office appoint any person approved by the majority of the other Directors for the time being to be his Alternate or Substitute Director during

such period as he thinks fit and may in like manner at any time terminate such appointment. The nomination of an Alternate or Substitute Director shall be valid if made by letter, facsimile or email, provided that such nomination shall be confirmed within three months from the date of such by letter, facsimile or email by a written nomination complying with the above mentioned requirements, and any act done by the Alternate or Substitute Director nominated in such by letter, facsimile or email between the date thereof and the date of the receipt within the prescribed period by the Company of the written nomination shall be as valid and effectual as if such Alternate or Substitute Director had been duly appointed in the first instance, whether such written nomination shall be received by the Company within the prescribed period or not.

(2) The appointment of an Alternate or Substitute Director shall ipso facto determine if his appointor ceases for any reason to be a Director.

(3) An Alternate or Substitute Director shall be entitled to receive notices of meetings of the Directors and to attend and vote as a Director at any such meeting at which the Director appointing him is not personally present and generally to perform all functions of his appointor as a Director and in the absence of his appointor, he shall be entitled to sign any resolution passed in accordance with the provisions of regulation 113.

(4) An Alternate or Substitute Director shall not be entitled to ordinary remuneration which shall continue to be payable to his appointor as if no such appointment had been made.

PROCEEDINGS OF DIRECTORS

107.(1). **Meeting of Directors/Quorum:** The Directors or any Committee of Directors may meet together for the despatch of business, adjourn and otherwise regulate their meetings as they think fit and determine the quorum necessary for the transaction of business. Unless otherwise determined or unless there are fewer than two Directors, two Directors shall be a quorum. Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of votes the Chairman shall have a second or casting vote.

(2) The Directors may meet together either in person or by telephone, radio, conference television or any other form of audio or audio-visual instantaneous communication by which all persons participating in the meeting are able to hear and be heard by all other participants, for the despatch of business and adjourn and otherwise regulate their meetings as they think fit. A resolution passed by such a conference shall, notwithstanding that the Directors are not present together at one place at the time of conference, be deemed to have been passed at a meeting of the Directors held on the day and at the time at which the conference was held and shall be deemed to have been held at the registered office of the Company, unless otherwise agreed, and all Directors participating at that meeting shall be deemed for all purposes of these regulations to be present at that meeting.

(3) In case of a meeting which is not held in person, the fact that a Director is taking part in the meeting must be made known to all the other Directors taking part, and no Director may disconnect or cease to take part in the meeting unless he makes known to all other Directors taking part that he is ceasing to take part in the meeting. Until a Director makes it known that he is ceasing to take part in the meeting, he is deemed to continue to form part of the quorum.

108. **Director may summon for meeting of Directors:** A Director may and, on the request of a Director, the Secretary shall, at any time summon a meeting of the Directors by notice served upon the several members of the Board. Notice of the meeting may be given by telefax, telex, cable, telegram or any form of electronic communication approved by the Directors for such purpose from time to time incorporating, if the Directors deem necessary, the use of security and/or identification procedures and devices approved by the Directors.

109. **Notice of Directors' meetings:** Notice of every Directors' meeting shall be sent to each Director and/or Alternate Director.

110. **Chairman of Directors:** The Directors or any Committee of the Directors may from time to time elect a Chairman who shall preside at their meetings, but if no such Chairman be

elected or if at any meeting the Chairman is not present within five minutes after the time appointed for holding the same a substitute for that meeting shall be appointed by such meeting from among the Directors present.

111. Proceedings in case of vacancies: The continuing Directors may act notwithstanding any vacancy in their body, but if and so long as their number is reduced below the minimum number fixed by or pursuant to these regulations, the continuing Directors or Director may act for the purpose of appointing sufficient Directors to bring the Board up to that number or of summoning a general meeting of the Company notwithstanding that there shall not be a quorum, but for no other purpose.

112. Validity of acts of Directors in spite of some formal defects: All acts bona fide done by any meeting of Directors or by Committee of Directors or by any person acting as a Director shall, notwithstanding it be afterwards discovered that there was some defect in the appointment of any such Director or person acting as aforesaid or that they or any of them were disqualified, be as valid as if every such person had been duly appointed and was qualified to be a Director.

113. Directors' resolution in writing: A resolution in writing signed by a majority of the Directors shall be as valid and effectual as if it had been passed at a meeting of the directors or of a Committee of the Directors. Any such resolution may be contained in a single document or may consist of several documents all in like form. For the purpose of this Regulation, the expressions "in writing" and "signed" shall include telefax, telex, cable, telegram or any form of electronic communication approved by the Directors for such purpose from time to time incorporating, if the Directors deem necessary, the use of security and/or identification procedures and devices approved by the Directors.

114. Sole Director's Resolutions: Where the Company has only one Director, he may pass a resolution by recording it and signing the record. For the purpose of this Regulation, the expression "signing" shall include telefax, telex, cable, telegram or any form of electronic communication approved by the Sole Director for such purpose from time to time incorporating, if he deem necessary, the use of security and/or identification procedures and devices approved by him.

MINUTES

115. Minutes of Meeting: The Directors shall cause proper minutes to be made in books to be provided for the purpose of all appointments of offices made by the Directors, of the proceedings of all meetings of Directors and Committees of Directors and of the attendances thereat and of the proceedings of all meetings of the Company and all business transacted, resolutions passed and orders made at such meetings and any such minutes of any meeting, if purporting to be signed by the Chairman of such meeting or by the Chairman of the next succeeding meeting of the Company or Directors or Committee as the case may be, shall be sufficient evidence without any further proof of the facts therein stated. For the purpose of this Regulation, the expression "signed" shall include telefax, telex, cable, telegram or any form of electronic communication approved by the Directors for such purpose from time to time incorporating, if the Directors deem necessary, the use of security and/or identification procedures and devices approved by the Directors.

116. Records: Any register, index, minute book, accounting record, minute or other documents required by this Constitution or by the Act to be kept by or on behalf of the Company may, subject to and in accordance with the Act, be kept in hard copy form or in electronic form, and arranged in the manner that the Directors think fit. If such records are kept in electronic form, the Directors shall ensure that they are capable of being reproduced in hard copy form, and shall provide for the manner in which the records are to be authenticated and verified. In any case where such records are kept otherwise than in hard copy form, the Directors shall take reasonable precautions for ensuring the proper maintenance and authenticity of such records, guarding against falsification and facilitating the discovery of any falsifications.

DIVIDENDS AND RESERVE

117.(1) Application of profits: Subject to any right or privileges for the time being attached to any shares in the capital of the Company having preferential, deferred or other special rights in regard to dividends, the profits of the Company which it shall from time to time be determined to distribute by way of dividend shall be applied in payment of dividends upon the shares of the Company: -

- (a) in proportion to the number of shares held by a Member but where shares are partly paid all dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the partly paid shares; and
- (b) apportioned and paid proportionately to the amounts so paid or credited as paid during any portion or portions of the period in respect of which the dividend is paid.

(2) For the purposes of regulation 117(1), an amount paid or credited as paid on a share in advance of a call is to be ignored.

118. Directors may form reserve fund and invest: The Directors may before recommending any dividend set aside out of the profits of the Company such sum or sums as they think proper as a reserve fund which shall at the discretion of the Directors be applicable for meeting contingencies, for the gradual liquidation of any debt or liability of the Company or for repairing or maintaining any works connected with the business of the Company or shall be as to the whole or in part applicable for special dividends or for equalising dividends or for distribution by way of special dividend or bonus on such terms and in such manner as the Directors shall from time to time determine and the Directors may divide the reserve fund into separate funds for special purposes and may invest the sums from time to time carried to the credit of such fund or funds upon such securities (other than the share of the Company) as they may select. The Directors may also from time to time carry forward such sums as they may deem expedient in the interests of the Company.

119. Power to carry profit to reserve: The Directors may establish a reserve to be called either "capital reserve" or "realisation account" and shall either carry on the credit of such reserve from time to time all moneys realised on the sale of any investments held by the Company in excess of the then book price of the same or apply the same in providing for depreciation or contingencies. Such capital reserve or realisation accounts and all other moneys in the nature of accretion to capital, whether on sale of investments held, or otherwise, shall be treated for all purposes as capital moneys and not as profits available for dividend. Any losses realised on the sale of any investments may be carried to the debit of capital reserve or realisation account except in so far as the Directors shall decide to make good the same out of other funds of the Company.

120. Power to invest reserves: The Directors shall be at liberty to invest any sums carried to any reserve account or accounts upon such investments as they deem fit, other than shares of the Company, and from time to time deal with and vary such investments and dispose of all or any part thereof for the benefit of the Company (save as hereinbefore provided) and to divide the ordinary reserve account or accounts into such special accounts as they think fit with full power to employ the assets constituting the ordinary reserve account or accounts in the business of the Company.

121. Declaration of dividends: The Directors may from time to time declare dividends, but no such dividend shall (except as by the Statutes expressly authorised) be payable otherwise than out of the profits of the Company. No higher dividend shall be paid than is recommended by the Directors and a declaration by the Directors as to the amount of the profits at any time available for dividends shall be conclusive. The Directors may, if they think fit, and if in their opinion the position of the Company justifies such payment, from time to time declare and pay an interim dividend, or pay any preferential dividend on shares issued upon the terms that the preferential dividends thereon shall be payable on fixed dates.

122. Payment of dividends in specie: With the sanction of a general meeting, dividends may be paid wholly or in part in specie, and may be satisfied in whole or in part by the distribution

amongst the Members in accordance with their rights of specific assets and in particular of fully paid shares, stock or debentures of any other company, or of any other property suitable for distribution as aforesaid. Where any difficulty arises in regard to such distribution, the Directors may settle the same as they think expedient, and fix the value for distribution of such specific assets or any part thereof and may determine that cash payments shall be made to any members upon the footing of the value so fixed in order to adjust the rights of all parties, and may vest any such specific assets in trustees as may seem expedient to the Directors.

123. **Deduction of debts due to Company:** The Directors may deduct from any dividend or other moneys payable in respect of any share held by a Member, either alone or jointly with any other Member, all such sums of money (if any) as may be due and payable by him either alone or jointly with any other person to the Company on account of calls or otherwise.

124. **Effect of transfer:** A transfer of a share shall not pass the right to any dividend declared in respect thereof before the transfer has been registered.

125. **Dividends payable by cheque:** Any dividend, instalment of dividend or interest in respect of any share may be paid by cheque or warrant payable to the order of the Member entitled thereto, or (in the case of joint holders) of that Member whose name stands first on the Electronic Register of Members in respect of the joint holding. Every such cheque or warrant shall (unless otherwise directed) be sent by post to the last registered address of the Member entitled thereto, and the receipt of the person whose name appears on the Electronic Register of Members as the owner of any share, or in the case of joint holders, of any one of such holders, or of his or their agent duly appointed in writing, shall be a good discharge to the Company for all dividends or other payments made in respect of such share. Every such cheque or warrant shall be sent at the risk of the person entitled to the money represented thereby. No unpaid dividend or interest shall bear interest as against the Company.

BONUS ISSUES AND CAPITALISATION OF PROFITS AND RESERVES

126.(1) **Power to issue bonus shares and capitalise profits:** The Company in general meeting may, upon the recommendation of the Directors, resolve that it is desirable to: -

- (a) issue bonus shares for which no consideration is payable to the Company to the Members holding shares in the Company in proportion to their then holdings of shares; and/or
- (b) capitalise any part of the amount for the time being standing to the credit of the Company's reserve funds or to the credit of the profit and loss account or otherwise available for distribution; and accordingly that such sum be set free for the distribution amongst the Members who would have been entitled thereto if distributed by way of dividend and in the same proportions on condition that the same be not paid in cash but be applied either in or towards paying up any amounts for the time being unpaid on any shares held by such Members respectively or paying up in full unissued shares or debentures of the Company to be allotted and distributed credited as fully paid up to and amongst such Members or their nominees in the proportion aforesaid or partly in the one way and partly in the other and the Directors shall give effect to such resolution.

(2) **Implementation of resolution to issue bonus shares and/or capitalise profits:** Whenever such resolution as aforesaid shall have been passed, the Directors shall do all acts and things required to give effect to any such bonus issue and/or capitalisation with full power to the Directors to make such provision for the satisfaction of the right of any Member under such resolution to a fractional part of a share by the issue of fractional certificates or by payment in cash or otherwise as they think fit and also to authorise any person to enter on behalf of the Members entitled thereto or their nominees into an agreement with the Company providing for any such bonus issue or capitalisation; and any agreement made under such authority shall be effective and binding on all such Members and their nominees.

ACCOUNTS

127. **Accounts to be kept:** The Directors shall cause proper books of account to be kept with respect to:-

- (a) all sums of money received and expended by the Company and the matters in respect of which the receipt and expenditure takes place;
- (b) all sales and purchases of goods by the Company; and
- (c) the assets and liabilities of the Company. Such books of account shall give a true and fair view of the state of the Company's affairs and explain its transactions.

128. **Where to keep books of account:** The books of account, whether in electronic form or in hard copy, shall be kept at the Office, or, subject to Section 199 of the Act or such other applicable law, at such other place or places as the Directors think fit and shall always be open to the inspection of the Directors.

129. **Inspection of books of Company by Members:** The Directors shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the Company or any of them shall be open to the inspection of Members and no Member (not being a Director) shall have any right of inspecting any account or book or document of the Company except as conferred by Statute or authorised by the Directors or by a resolution of the Company in general meeting.

130. **Accounts to be laid before Company:** Subject to the provisions of the Act or such other applicable law exempting the Company from audit requirements, the Directors shall from time to time in accordance with Section 201 of the Act or such other applicable law cause to be prepared and to be laid before the Company in general meeting such profit and loss accounts, financial statements and reports as are referred to in that Section or such applicable law Provided Always That while a resolution of the Company under the provisions of the Act or such other applicable law on the dispensation of annual general meetings is in force, the Directors need not comply with the requirement in the said Section 201 or such applicable law to lay before the Company at its general meeting such profit and loss accounts, financial statements and reports but the Directors shall instead send such documents to persons entitled to receive notice of general meetings of the Company.

131. **Copy of accounts to be sent to every Member and debenture holder of Company:** Subject to the provisions of the Act or such other applicable law exempting the Company from audit requirements, a copy of every financial statement and profit and loss account (including every document required by law to be annexed thereto) which (or which, but for the provisions of the Act or such applicable law dispensing with the need to lay accounts before the Company if a resolution dispensing with the holding of annual general meetings is in force) is to be laid before the Company in general meeting together with a copy of the Auditor's report shall, not less than fourteen days before the date of the meeting (or if a resolution under the Act or such other applicable law is in force in relation to the dispensation of the holding of annual general meetings, not less than 28 days before the end of the period allowed for the laying of those documents), be sent to every Member of, and every holder of debentures of, the Company and to every other person who is entitled to receive notices from the Company under the Act or such applicable law or of these regulations; Provided Always That this regulation shall not require a copy of those documents to be sent to any person of whose address the Company is not aware or to more than one of the joint holders of any shares or debentures.

AUDIT

132. **Appointment of Auditors:** Subject to the provisions of the Act or such other applicable law exempting the Company from its obligation to appoint auditors in certain circumstances, the Company shall appoint auditors of the Company (if required by the Act or such

other applicable law) and their duties regulated in accordance with the Act or such other applicable law.

NOTICES

133(1). **Service of notices by Company:** A notice or other document may be served by the Company upon any Member, either personally, or by sending it through the post in a prepaid letter addressed to such Member at his address as appearing in the Electronic Register of Members.

133(2). Without prejudice to the provisions of Regulation 133(1), any notice or document (including, without limitation, any accounts, balance sheet, financial statements or report) which is required or permitted to be given, sent or served under the Act or under this Constitution by the Company, or by the Directors, to a Member may be given, sent or served using electronic communications:

- a) to the current address of that person; or
- b) by making it available on a website prescribed by the Company from time to time; or
- c) in such manner as such Member expressly consents to by giving notice in writing to the Company in accordance with the provisions of this Constitution.

134. **Service of notices on joint-holders:** All notices directed to be given to the Members shall, with respect to any share to which persons are jointly entitled, be given to whichever of such persons is named first in the Electronic Register of Members, and notice so given shall be sufficient notice to all the holders of such shares.

135. **Service of notices on Members:** Any Member described in the Electronic Register of Members shall from time to time give the Company an address at which notices may be served upon him but, saved as aforesaid, no Member other than a Member described in the Electronic Register of Members shall be entitled to receive any notice from the Company.

136. **Service of documents other than notice:** Any document other than a notice requiring to be served on a Member, may be served in like manner as a notice may be given to him under these regulations.

137. **Mode of service:** Any summons, notice, order or other document required to be sent to or served upon the Company, or upon any officer of the Company may be sent or served by leaving the same or sending it through the post in a prepaid letter or by facsimile or by email, addressed to the Company or to such officer at the Office.

138(1). **When is service deemed effected:** Any notice or other document shall be deemed to have been served, if served by post, on the day of despatch, and in proving such service it shall be sufficient to prove that the letter containing the notice or document was properly addressed and put into the post as a prepaid letter.

138(2). Where a notice or document is given, sent or served by electronic communications:

- a) to the current address of a person pursuant to Regulation 133(2)(a), it shall be deemed to have been duly given, sent or served at the time of transmission of the electronic communication by the email server or facility operated by the Company or its service provider to the current address of such person (notwithstanding any delayed receipt, non-delivery or "returned mail" reply message or any other error message indicating that the electronic communication was delayed or not successfully sent); or
- b) by making it available on a website pursuant to Regulation 133(2)(b), it shall be deemed to have been duly given, sent or served on the date on which the notice or document is first made available on the website.

139. **Service of notice after death or bankruptcy of Member:** Any notice or document served upon or sent to, or left at the registered address of, any Member in pursuance of these

regulations, shall, notwithstanding that such Member be then deceased or bankrupt, and whether or not the Company has notice of his decease or bankruptcy be deemed to have been duly served in respect of any share held by such Member, whether held solely or jointly with other persons; until some other person be registered in his stead as the holder or joint holder of such share, and such service shall, for all purposes of these regulations, be deemed a sufficient service of such notice or document on his executors, administrators or assigns, and all persons (if any) jointly interested with him in such share.

WINDING UP

140. Distribution of surplus assets: If the Company shall be wound up, subject to due provision being made satisfying the claims of any holders of shares having attached thereto any special rights in regard to the repayment of capital, the surplus assets shall be applied in repayment of the capital paid up or credited as paid up on the shares at the commencement of the winding up. If the surplus assets shall be insufficient to repay the whole of the capital paid up or credited as paid up on the shares, such assets shall be distributed (as nearly as practicable) in proportion to the capital paid up or credited as paid up on the shares at the commencement of the winding up.

141. Distribution of assets in specie: If the Company shall be wound up, the Liquidators may, with the sanction of a Special Resolution, divide among the Members in specie any part of the assets of the Company and any such division may be otherwise than in accordance with the existing rights of the Members, but so that if any division is resolved on otherwise than in accordance with such rights, the Members shall have the same right of dissent and consequential rights as if such resolution were a Special Resolution passed pursuant to Section 306 of the Act or such other applicable law. A Special Resolution sanctioning a transfer or sale to another company duly passed pursuant to the said Section or such applicable law may in like manner authorise the distribution of any shares or other consideration receivable by the Liquidators amongst the Members otherwise than in accordance with their existing rights; and any such determination shall be binding upon all the Members subject to the right of dissent and consequential rights conferred by the said Section or such applicable law.

142. Service of notice by liquidator: In the event of a winding up of the Company every Member of the Company who is not for the time being in the Republic of Singapore shall be bound, within fourteen days after the passing of an effective resolution to wind up the Company voluntarily, or within the like period after the making of an order for the winding up of the Company, to serve notice in writing on the Company appointing some householder in the Republic of Singapore upon whom all summonses, notices, processes, orders and judgements in relation to or under the winding up of the Company may be served, and in default of such nomination the Liquidator of the Company shall be at liberty on behalf of such Member to appoint some such person, and service upon any such appointee shall be deemed to be a good personal service on such Member for all purposes, and where the Liquidator makes any such appointment he shall with all convenient speed, give notice thereof to such Member by advertisement in any English newspaper widely circulated in Singapore or by a registered letter sent through the post and addressed to such Member at his address as appearing in the Electronic Register of Members, and such notice shall be deemed to be served on the day following that on which the advertisement appears or the letter is posted.

INDEMNITY

143. Indemnity of officers: Subject to the provisions of the Act or such other applicable law, every officer of the Company is to be indemnified out of the assets of the Company against any liability (other than any liability referred to in Section 172B(1)(a) or (b) of the Act) incurred by the officer to a person other than the Company attaching to the officer in connection with any negligence, default, breach of duty or breach of trust.

144. Indemnity of auditors: Subject to the provisions of the Act or such other applicable law, every auditor is to be indemnified out of the assets of the Company against any liability incurred by the auditor in defending any proceedings, whether civil or criminal, in which judgment is given in the auditor's favour or in which the auditor is acquitted or in connection with any application under

the Act in which relief is granted to the auditor by the Court in respect of any negligence, default, breach of duty or breach of trust.

PERSONAL DATA

145. A Member who is a natural person is deemed to have consented to the collection, use and disclosure of his personal data (whether such personal data is provided by that Member or is collected through a third party) by the Company (or its agents or service providers) from time to time for any of the following purposes:

- a) implementation and administration of any corporate action by the Company (or its agents or service providers);
- b) internal analysis and/or market research by the Company (or its agents or service providers);
- c) administration by the Company (or its agents or service providers) of that Member's holding of shares in the capital of the Company;
- d) implementation and administration of any service provided by the Company (or its agents or service providers) to its Members to receive notices of meetings, financial statements and other shareholder communications and/or for proxy appointment, whether by electronic means or otherwise;
- e) processing, administration and analysis by the Company (or its agents or service providers) of proxies and representatives appointed for any general meeting (including any adjournment thereof) and the preparation and compilation of the attendance lists, minutes and other documents relating to any general meeting (including any adjournment thereof);
- f) implementation and administration of, and compliance with, any provision of these Regulations; and
- g) purposes which are reasonably related to any of the above purpose.

146. Any Member who appoints a proxy and/or representative for any general meeting and/or any adjournment thereof is deemed to have warranted that where such Member discloses the personal data of such proxy and/or representative to the Company (or its agents or service providers), that Member has obtained the prior consent of such proxy and/or representative for the collection, use and disclosure by the Company (or its agents or service providers) of the personal data of such proxy and/or representative for the purposes specified in Regulation 145(e) and 145(f) and is deemed to have agreed to indemnify the Company in respect of any penalties, liabilities, claims, demands, losses and damages as a result of such Member's breach of warranty.

SUBSCRIBERS

147. We, the persons whose names and occupations are set out in this Constitution, desire to form a company in pursuance of this Constitution and we each agree to take the number of shares in the capital of the company set out against our respective names.

Name of Subscriber/Occupation/Address	Number of Shares	Shares Currency	Amount Paid-up
Michael Rinehart Hollingsworth Acting for and on behalf of Hanweck Associates, LLC 30 Broad Street 42nd Floor New York, New York United States of America 10004 Registration No. 2981709 Incorporated in United States of America	1	SGD	1


1 SHARE

Signed by Michael Rinehart Hollingsworth on 29 APR 2019

SUBSCRIBERS

147. We, the persons whose names and occupations are set out in this Constitution, desire to form a company in pursuance of this Constitution and we each agree to take the number of shares in the capital of the company set out against our respective names.

Name of Subscriber/Occupation/Address	Number of Shares	Shares Currency	Amount Paid-up
Goh Hoi Lai Director 17 Hume Avenue #02-04 Singapore 598726 	1	SGD	1
Sardool Singh S/O Baljit Singh Director 35D Cotswold Close Singapore 357723 	1	SGD	1

Signed by Goh Hoi Lai on 14 MAY 2019

Signed by Sardool Singh s/o Baljit Singh on 14 MAY 2019



CERTIFICATE CONFIRMING INCORPORATION OF COMPANY

Company Name : HANWECK ASSOCIATES PTE. LTD.

UEN : 201917381E

This is to confirm that the company was incorporated under the Companies Act, on and from **30/05/2019** and that the company is a **PRIVATE COMPANY LIMITED BY SHARES**.



TAN YONG TAT
ASST REGISTRAR OF COMPANIES & BUSINESS NAMES
ACCOUNTING AND CORPORATE REGULATORY AUTHORITY
SINGAPORE

Dated : 30/05/2019
Receipt Number: ACRA190530164575



Authentication No. : V193634180

RR Hanweck Associates Limited

Company Number: NI631407

The Companies Act 2006

PRIVATE COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION

Hanweck Associates Limited

Incorporated on 20th May 2015

**A&L Goodbody Solicitors
6th Floor
42/46 Fountain Street
Belfast
BT1 5EF**

**Tel: +44 28 9031 4466
Fax: +44 28 9031 4477
www.algoodbody.com**

THE COMPANIES ACT 2006

PRIVATE COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION OF

Hanweck Associates Limited

1. PRELIMINARY

- 1.1 The model articles of association for private companies limited by shares contained in Schedule 1 to the Companies (Model Articles) Regulations 2008 (SI 2008 No. 3229) (the "Model Articles") shall apply to the Company save in so far as they are excluded or modified hereby and such Model Articles and the articles set out below shall be the Articles of Association of the Company (the "Articles").
- 1.2 In these Articles, any reference to a provision of the Companies Act 2006 shall be deemed to include a reference to any statutory modification or re-enactment of that provision for the time being in force.
- 1.3 Model Articles 7(2), 9(2), 14, 19(5), 21, 24, 26(5), 28(3), 36(4) and 44(4) do not apply to the Company.
- 1.4 The headings used in these Articles are included for the sake of convenience only and shall be ignored in construing the language or meaning of these Articles.
- 1.5 In these Articles, unless the context otherwise requires, references to nouns in the plural form shall be deemed to include the singular and vice versa, references to one gender include all genders and references to persons include bodies corporate and unincorporated associations.

2. DEFINED TERMS

- 2.1 Model Article 1 shall be varied by the inclusion of the following definitions:-

"appointor" has the meaning given in Article 7.1;

"call" has the meaning given in Article 10.1;

"call notice" has the meaning given in Article 10.1;

"call payment date" has the meaning given in Article 10.4;

"forfeiture notice" has the meaning given in Article 10.4;

"lien enforcement notice" has the meaning given in Article 9.4;

"relevant rate" has the meaning given in Article 10.4;

"secretary" means the secretary of the Company, if any, appointed in accordance with Article 6.1 or any other person appointed to perform the duties of the secretary of the Company, including a joint, assistant or deputy secretary; and

"working day" means a day that is not a Saturday or Sunday, Christmas Day, Good Friday or any day that is a bank holiday under the Banking and Financial Dealings Act 1971 in the part of the United Kingdom where the Company is registered.

3. PROCEEDINGS OF DIRECTORS

- 3.1** The maximum and minimum number of directors may be determined from time to time by ordinary resolution. Subject to and in default of any such determination there shall be no maximum number of directors and the minimum number of directors shall be one. Whenever the minimum number of directors is one, the general rule about decision-making by the directors does not apply, and the sole director may take decisions without regard to any of the provisions of the Articles (including Model Article 11(2)) relating to directors' decision-making.
- 3.2** Subject to Article 3.3, notwithstanding the fact that a proposed decision of the directors concerns or relates to any matter in which a director has, or may have, directly or indirectly, any kind of interest whatsoever, that director may participate in the decision-making process for both quorum and voting purposes.
- 3.3** If the directors propose to exercise their power under section 175(4)(b) of the Companies Act 2006 to authorise a director's conflict of interest, the director facing the conflict is not to be counted as participating in the decision to authorise the conflict for quorum or voting purposes.
- 3.4** Subject to the provisions of the Companies Act 2006, and provided that (if required to do so by the said Act) he has declared to the directors the nature and extent of any direct or indirect interest of his, a director, notwithstanding his office:-
- (a)** may be a party to or otherwise interested in, any transaction or arrangement with the Company or in which the Company is otherwise interested;
 - (b)** may be a director or other officer or an employee of, or a party to any transaction or arrangement with, or otherwise interested in, any subsidiary of the Company or body corporate in which the Company is interested; and
 - (c)** is not accountable to the Company for any remuneration or other benefits which he derives from any such office or employment or from any such transaction or arrangement or from any interest in any such body corporate and no transaction or arrangement is liable to be avoided on the ground of any such remuneration, benefit or interest.

4. UNANIMOUS DECISIONS

- 4.1** Model Article 8(2) shall be amended by the deletion of the words "copies of which have been signed by each eligible director" and the substitution of the following "where each eligible director has signed one or more copies of it" in its place. Model Article 8(2) shall be read accordingly.

5. TERMINATION OF DIRECTOR'S APPOINTMENT

- 5.1** In addition to the events terminating a director's appointment set out in Model Article 18, a person ceases to be a director as soon as that person has for more than six consecutive months been absent without permission of the directors from meetings of directors held during that period and the directors make a decision to vacate that person's office.

6. SECRETARY

- 6.1** The directors may appoint a secretary to the Company for such period, for such remuneration and upon such conditions as they think fit; and any secretary so appointed by the directors may be removed by them.

7. ALTERNATE DIRECTORS

- 7.1** (a) Any director (the "appointor") may appoint as an alternate any other director, or any other person approved by a decision of the directors, to:-
- (i) exercise that director's powers; and
 - (ii) carry out that director's responsibilities,
- in relation to the taking of decisions by the directors in the absence of the alternate's appointor.
- (b) Any appointment or removal of an alternate must be effected by notice in writing to the Company signed by the appointor, or in any other manner approved by the directors. The notice must:-
- (i) identify the proposed alternate; and
 - (ii) in the case of a notice of appointment, contain a statement signed by the proposed alternate that he is willing to act as the alternate of his appointor.
- 7.2** (a) An alternate director has the same rights to participate in any directors' meeting or decision of the directors reached in accordance with Model Article 8, as the alternate's appointor.
- (b) Except as these Articles specify otherwise, alternate directors:-
- (i) are deemed for all purposes to be directors;
 - (ii) are liable for their own acts or omissions;
 - (iii) are subject to the same restrictions as their appointors; and
 - (iv) are not deemed to be agents of or for their appointors.
- (c) A person who is an alternate director but not a director:-
- (i) may be counted as participating for the purposes of determining whether a quorum is participating (but only if that person's appointor is not participating); and
 - (ii) may sign or otherwise signify his agreement in writing to a written resolution in accordance with Model Article 8 (but only if that person's appointor has not signed or otherwise signified his agreement to such written resolution).
- No alternate may be counted as more than one director for such purposes.
- (d) An alternate director is not entitled to receive any remuneration from the Company for serving as an alternate director except such part of the remuneration payable to that alternate's appointor as the appointor may direct by notice in writing made to the Company.

- (e) Model Article 20 is modified by the deletion of each of the references to "directors" and the replacement of each such reference with "directors and/or any alternate directors".

7.3 An alternate director's appointment as an alternate terminates:-

- (a) when his appointor revokes the appointment by notice to the Company in writing specifying when it is to terminate;
- (b) on the occurrence in relation to the alternate of any event which, if it occurred in relation to the alternate's appointor would result in the termination of the appointor's office as director;
- (c) on the death of his appointor; or
- (d) when his appointor's appointment as a director terminates.

8. ISSUE OF SHARES

8.1 Shares may be issued as nil, partly or fully paid.

8.2 (a) Unless the members of the Company by special resolution direct otherwise, all shares which the directors propose to issue must first be offered to the members in accordance with the following provisions of this Article.

- (b) Shares must be offered to members in proportion as nearly as may be to the number of existing shares held by them respectively.
- (c) The offer shall be made by notice specifying the number of shares offered, and limiting a period (not being less than 14 days) within which the offer, if not accepted, will be deemed to be declined.
- (d) After the expiration of the period referred to in (c) above, those shares so deemed to be declined shall be offered in the proportion aforesaid to the persons who have, within the said period, accepted all the shares offered to them; and such further offer shall be made in the like terms in the same manner and limited by a like period as the original offer.
- (e) Any shares not accepted pursuant to the offer referred to in (c) and the further offer referred to in (d) or not capable of being offered as aforesaid except by way of fractions and any shares released from the provisions of this Article by any such special resolution as aforesaid shall be under the control of the directors, who may allot, grant options over or dispose of the same to such persons, on such terms, and in such manner as they think fit.

8.3 In accordance with section 567 of the Companies Act 2006, sections 561 and 562 of the said Act are excluded.

9. LIEN

9.1 The Company has a first and paramount lien on all shares (whether or not such shares are fully paid) standing registered in the name of any person indebted or under any liability to the Company, whether he is the sole registered holder thereof or is one of two or more joint holders, for all moneys payable by him or his estate to the Company (whether or not such moneys are presently due and payable).

9.2 The Company's lien over shares:-

- (a) takes priority over any third party's interest in such shares; and
- (b) extends to any dividend or other money payable by the Company in respect of such shares and (if the Company's lien is enforced and such shares are sold by the Company) the proceeds of sale of such shares.

9.3 The directors may at any time decide that a share which is or would otherwise be subject to the Company's lien shall not be subject to it, either wholly or in part.

9.4 (a) Subject to the provisions of this Article, if:-

- (i) a notice of the Company's intention to enforce the lien ("lien enforcement notice") has been sent in respect of the shares; and
- (ii) the person to whom the lien enforcement notice was sent has failed to comply with it,

the Company may sell those shares in such manner as the directors decide.

(b) A lien enforcement notice:-

- (i) may only be sent in respect of shares if a sum is payable to the Company by the sole registered holder or one of two or more joint registered holders of such shares and the due date for payment of such sum has passed;
- (ii) must specify the shares concerned;
- (iii) must include a demand for payment of the sum payable within 14 days;
- (iv) must be addressed either to the holder of such shares or to a person entitled to such shares by reason of the holder's death, bankruptcy or otherwise; and
- (v) must state the Company's intention to sell the shares if the notice is not complied with.

(c) If shares are sold under this Article:-

- (i) the directors may authorise any person to execute an instrument of transfer of the shares to the purchaser or a person nominated by the purchaser; and
- (ii) the transferee is not bound to see to the application of the consideration, and the transferee's title is not affected by any irregularity in or invalidity of the process leading to the sale.

(d) The net proceeds of any such sale (after payment of the costs of sale and any other costs of enforcing the lien) must be applied:-

- (i) first, in payment of so much of the sum for which the lien exists as was payable at the date of the lien enforcement notice; and
- (ii) second, in payment to the person entitled to the shares at the date of the sale, but only after the certificate for the shares sold has been surrendered to the company for cancellation or a suitable indemnity has been given for any lost certificates, and subject to a lien equivalent to the company's lien over the shares before the

sale for any money payable in respect of the shares after the date of the lien enforcement notice.

- (e) A statutory declaration by a director or the secretary that the declarant is a director or the secretary and that a share has been sold to satisfy the Company's lien on a specified date:-
 - (i) is conclusive evidence of the facts stated in it as against all persons claiming to be entitled to the share; and
 - (ii) subject to compliance with any other formalities of transfer required by these Articles or by law, constitutes a good title to the share.

10. CALLS ON SHARES AND FORFEITURE

- 10.1 (a) Subject to these Articles and the terms on which shares are allotted, the directors may send a notice (a "call notice") to a member requiring the member to pay the Company a specified sum of money (a "call") which is payable in respect of shares which that member holds at the date when the directors decide to send the call notice.
- (b) A call notice:-
 - (i) may not require a member to pay a call which exceeds the total sum unpaid on that member's shares (whether as to the share's nominal value or any amount payable to the Company by way of premium);
 - (ii) must state when and how any call to which it relates is to be paid; and
 - (iii) may permit or require the call to be paid by instalments.
- (c) A member must comply with the requirements of a call notice, but no member is obliged to pay any call before 14 days have passed since the call notice was sent.
- (d) Before the Company has received any call due under a call notice the directors may:-
 - (i) revoke it wholly or in part; or
 - (ii) specify a later time for payment than is specified in the call notice,by a further notice in writing to the member in respect of whose shares the call was made.
- 10.2 (a) Liability to pay a call is not extinguished or transferred by transferring the shares in respect of which the call is required to be paid.
- (b) Joint holders of a share are jointly and severally liable to pay all calls in respect of that share.
- (c) Subject to the terms on which shares are allotted, the directors may, when issuing shares, make arrangements for a difference between the holders in the amounts and times of payment of calls on their shares.

- 10.3 (a)** A call notice need not be issued in respect of sums which are specified, in the terms on which a share is allotted, as being payable to the Company in respect of that share (whether in respect of nominal value or premium):-
- (i)** on allotment;
 - (ii)** on the occurrence of a particular event; or
 - (iii)** on a date fixed by or in accordance with the terms of issue.
- (b)** But if the due date for payment of such a sum has passed and it has not been paid, the holder of the share concerned is treated in all respects as having failed to comply with a call notice in respect of that sum, and is liable to the same consequences as regards the payment of interest and forfeiture.
- 10.4 (a)** If a person is liable to pay a call and fails to do so by the call payment date:-
- (i)** the directors may send a notice of forfeiture (a "forfeiture notice") to that person; and
 - (ii)** until the call is paid, that person must pay the Company interest on the call from the call payment date at the relevant rate.
- (b)** For the purposes of this Article:-
- (i)** the "call payment date" is the date on which the call notice states that a call is payable, unless the directors give a notice specifying a later date, in which case the "call payment date" is that later date; and
 - (ii)** the "relevant rate" is the rate fixed by the terms on which the share in respect of which the call is due was allotted or, if no such rate was fixed when the share was allotted, five percent per annum.
- (c)** The relevant rate must not exceed by more than five percentage points the base lending rate most recently set by the Monetary Policy Committee of the Bank of England in connection with its responsibilities under Part 2 of the Bank of England Act 1998.
- (d)** The directors may waive any obligation to pay interest on a call wholly or in part.
- 10.5 A forfeiture notice:-**
- (a)** may be sent in respect of any share in respect of which a call has not been paid as required by a call notice;
 - (b)** must be sent to the holder of that share or to a person entitled to it by reason of the holder's death, bankruptcy or otherwise;
 - (c)** must require payment of a call and any accrued interest by a date which is not less than 14 days after the date of the forfeiture notice;
 - (d)** must state how the payment is to be made; and
 - (e)** must state that if the forfeiture notice is not complied with, the shares in respect of which the call is payable will be liable to be forfeited.

- 10.6** If a forfeiture notice is not complied with before the date by which payment of the call is required in the forfeiture notice, the directors may decide that any share in respect of which it was given is forfeited and the forfeiture is to include all dividends or other moneys payable in respect of the forfeited shares and not paid before the forfeiture.
- 10.7** (a) Subject to the following provisions of this Article 10.7, the forfeiture of a share extinguishes:-
- (i) all interests in that share, and all claims and demands against the Company in respect of it; and
 - (ii) all other rights and liabilities incidental to the share as between the person in whose name the share is registered and the Company.
- (b) Any share which is forfeited:-
- (i) is deemed to have been forfeited when the directors decide that it is forfeited;
 - (ii) is deemed to be the property of the Company; and
 - (iii) may be sold, re-allotted or otherwise disposed of as the directors think fit.
- (c) If a person's shares have been forfeited:-
- (i) the Company must send that person notice that forfeiture has occurred and record it in the register of members;
 - (ii) that person ceases to be a member in respect of those shares;
 - (iii) that person must surrender the certificate for the shares forfeited to the Company for cancellation;
 - (iv) that person remains liable to the Company for all sums due and payable by that person at the date of forfeiture in respect of those shares, including any interest (whether accrued before or after the date of forfeiture); and
 - (v) the directors may waive payment of such sums wholly or in part or enforce payment without any allowance for the value of the shares at the time of forfeiture or for any consideration received on their disposal.
- (d) At any time before the Company disposes of a forfeited share, the directors may decide to cancel the forfeiture on such terms as they think fit.
- 10.8** (a) If a forfeited share is to be disposed of by being transferred, the Company may receive the consideration for the transfer and the directors may authorise any person to execute the instrument of transfer.
- (b) A statutory declaration by a director or the secretary that the declarant is a director or the secretary and that a share has been forfeited on a specified date:-
- (i) is conclusive evidence of the facts stated in it as against all persons claiming to be entitled to the share; and

- (ii) subject to compliance with any other formalities of transfer required by these Articles or by law, constitutes a good title to the share.
- (c) A person to whom a forfeited share is transferred is not bound to see to the application of the consideration (if any) nor is that person's title to the share affected by any irregularity in or invalidity of the process leading to the forfeiture or transfer of the share.
- (d) If the company sells a forfeited share, the person who held it prior to its forfeiture is entitled to receive from the Company the proceeds of such sale, net of any commission, and excluding any amount which:-
 - (i) was, or would have become, payable; and
 - (ii) had not, when that share was forfeited, been paid by that person in respect of that share,

but no interest is payable to such a person in respect of such proceeds and the Company is not required to account for any money earned on them.

- 10.9** (a) A member may surrender any share:-
- (i) in respect of which the directors may issue a forfeiture notice;
 - (ii) which the directors may forfeit; or
 - (iii) which has been forfeited.
- (b) The directors may accept the surrender of any such share.
- (c) The effect of surrender on a share is the same as the effect of forfeiture on that share.
- (d) A share which has been surrendered may be dealt with in the same way as a share which has been forfeited.

11. SHARE CERTIFICATES

- 11.1** (a) The Company must issue each member with one or more certificates in respect of the shares which that member holds.
- (b) Except as is otherwise provided in these Articles, all certificates must be issued free of charge.
- (c) No certificate may be issued in respect of shares of more than one class.
- (d) A member may request the Company, in writing, to replace:-
- (i) the member's separate certificates with a consolidated certificate; or
 - (ii) the member's consolidated certificate with two or more separate certificates.
- (e) When the Company complies with a request made by a member under (d) above, it may charge a reasonable fee as the directors decide for doing so.
- 11.2** (a) Every certificate must specify:-

- (i) in respect of how many shares, of what class, it is issued;
 - (ii) the nominal value of those shares;
 - (iii) whether the shares are nil, partly or fully paid; and
 - (iv) any distinguishing numbers assigned to them.
- (b) Certificates must:-
- (i) have affixed to them the Company's common seal; or
 - (ii) be otherwise executed in accordance with the Companies Acts.

12. CONSOLIDATION OF SHARES

- 12.1 (a) This Article applies in circumstances where:-
- (i) there has been a consolidation of shares; and
 - (ii) as a result, members are entitled to fractions of shares.
- (b) The directors may:-
- (i) sell the shares representing the fractions to any person including the Company for the best price reasonably obtainable; and
 - (ii) authorise any person to execute an instrument of transfer of the shares to the purchaser or a person nominated by the purchaser.
- (c) Where any holder's entitlement to a portion of the proceeds of sale amounts to less than a minimum figure determined by the directors, that member's portion may be distributed to an organisation which is a charity for the purposes of the law of England and Wales, Scotland or Northern Ireland.
- (d) A person to whom shares are transferred is not obliged to ensure that any purchase money is received by the person entitled to the relevant fractions.
- (e) The transferee's title to the shares is not affected by any irregularity in or invalidity of the process leading to their sale.

13. DIVIDENDS

- 13.1 (a) Except as otherwise provided by these Articles or the rights attached to the shares, all dividends must be:-
- (i) declared and paid according to the amounts paid up on the shares on which the dividend is paid; and
 - (ii) apportioned and paid proportionately to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid.
- (b) If any share is issued on terms providing that it ranks for dividend as from a particular date, that share ranks for dividend accordingly.
- (c) For the purpose of calculating dividends, no account is to be taken of any amount which has been paid up on a share in advance of the due date for payment of that amount.

14. CAPITALISATION OF PROFITS

14.1 A capitalised sum which was appropriated from profits available for distribution may be applied:-

- (a) in or towards paying up any amounts unpaid on any existing nil or partly paid shares held by the persons entitled; or
- (b) in paying up new debentures of the Company which are then allotted credited as fully paid to the persons entitled or as they may direct.

14.2 Model Article 36(5)(a) is modified by the deletion of the words "paragraphs (3) and (4)" and their replacement with "Model Article 36(3) and Article 14.1".

15. WRITTEN RESOLUTIONS OF MEMBERS

15.1 (a) Subject to Article 15.1(b), a written resolution of members passed in accordance with Part 13 of the Companies Act 2006 is as valid and effectual as a resolution passed at a general meeting of the Company.

(b) The following may not be passed as a written resolution and may only be passed at a general meeting:-

- (i) a resolution under section 168 of the Companies Act 2006 for the removal of a director before the expiration of his period of office; and
- (ii) a resolution under section 510 of the Companies Act 2006 for the removal of an auditor before the expiration of his period of office.

15.2 (a) Subject to Article 15.2(b), on a written resolution, a member has one vote in respect of each share held by him.

(b) No member may vote on a written resolution unless all moneys currently due and payable in respect of any shares held by him have been paid.

16. NOTICE OF GENERAL MEETINGS

16.1 (a) Every notice convening a general meeting of the Company must comply with the provisions of:-

- (i) section 311 of the Companies Act 2006 as to the provision of information regarding the time, date and place of the meeting and the general nature of the business to be dealt with at the meeting; and
- (ii) section 325(1) of the Companies Act 2006 as to the giving of information to members regarding their right to appoint proxies.

(b) Every notice of, or other communication relating to, any general meeting which any member is entitled to receive must be sent to each of the directors and to the auditors (if any) for the time being of the Company.

17. QUORUM AT GENERAL MEETINGS

17.1 (a) If and for so long as the Company has one member only who is entitled to vote on the business to be transacted at a general meeting, that member present at the meeting in person or by one or more proxies or, in the event that the member is a corporation, by one or more corporate representatives, is a quorum.

- (b) If and for so long as the Company has two or more members entitled to vote on the business to be transacted at a general meeting, two of such members, each of whom is present at the meeting in person or by one or more proxies or, in the event that any member present is a corporation, by one or more corporate representatives, are a quorum.
- (c) Model Article 41(1) is modified by the addition of a second sentence as follows:-

"If, at the adjourned general meeting, a quorum is not present within half an hour from the time appointed therefor or, alternatively, a quorum ceases to be present, the adjourned meeting shall be dissolved."

18. VOTING AT GENERAL MEETINGS

- 18.1 (a) Subject to Article 18.2 below, on a vote on a resolution at a general meeting on a show of hands:-
 - (i) each member who, being an individual, is present in person has one vote;
 - (ii) if a member (whether such member is an individual or a corporation) appoints one or more proxies to attend the meeting, all proxies so appointed and in attendance at the meeting have, collectively, one vote; and
 - (iii) if a corporate member appoints one or more persons to represent it at the meeting, each person so appointed and in attendance at the meeting has, subject to section 323(4) of the Companies Act 2006, one vote.
- (b) Subject to Article 18.2 below, on a resolution at a general meeting on a poll, every member (whether present in person, by proxy or authorised representative) has one vote in respect of each share held by him.
- 18.2 No member may vote at any general meeting or any separate meeting of the holders of any class of shares in the Company, either in person, by proxy or, in the event that the member is a corporation, by corporate representative in respect of shares held by that member unless all moneys currently due and payable by that member in respect of any shares held by that member have been paid.
- 18.3 (a) Model Article 44(2) is amended by the deletion of the word "or" in Model Article 44(2)(c), the deletion of the "." after the word "resolution" in Model Article 44(2)(d) and its replacement with "; or" and the insertion of a new Model Article 44(2)(e) in the following terms:-

"by a member or members holding shares conferring a right to vote at the meeting being shares on which an aggregate sum has been paid up equal to not less than one-tenth of the total sum paid up on all shares conferring that right".
- (b) A demand for a poll made by a person as proxy for a member is the same as a demand made by the member.
- 18.4 Polls must be taken at the general meeting at which they are demanded and in such manner as the chairman directs.

19. DELIVERY OF PROXY NOTICES

- 19.1** Model Article 45(1) is modified, such that a "proxy notice" (as defined in Model Article 45(1)) and any authentication of it demanded by the directors must be received at an address specified by the Company in the proxy notice not less than 48 hours before the time for holding the meeting or adjourned meeting at which the proxy appointed pursuant to the proxy notice proposes to vote; and any proxy notice received at such address less than 48 hours before the time for holding the meeting or adjourned meeting shall be invalid.

20. COMMUNICATIONS

- 20.1** Subject to the provisions of the Companies Act 2006, a document or information may be sent or supplied by the Company to a person by being made available on a website.
- 20.2** (a) A member whose registered address is not within the United Kingdom and who gives to the Company an address within the United Kingdom at which notices may be sent to him or an address to which notices may be sent by electronic means is entitled to have notices sent to him at that address, but otherwise no such member is entitled to receive any notices from the Company.
- (b) If any share is registered in the name of joint holders, the Company may send notices and all other documents to the joint holder whose name stands first in the register of members in respect of the joint holding and the Company is not required to serve notices or other documents on any of the other joint holders.
- 20.3** (a) If the Company sends or supplies notices or other documents by first class post and the Company proves that such notices or other documents were properly addressed, prepaid and posted, the intended recipient is deemed to have received such notices or other documents 48 hours after posting.
- (b) If the Company sends or supplies notices or other documents by electronic means and the Company proves that such notices or other documents were properly addressed, the intended recipient is deemed to have received such notices or other documents 24 hours after they were sent or supplied.
- (c) If the Company sends or supplies notices or other documents by means of a website, the intended recipient is deemed to have received such notices or other documents when such notices or other documents first appeared on the website or, if later, when the intended recipient first received notice of the fact that such notices or other documents were available on the website.
- (d) For the purposes of this Article 20.3, no account shall be taken of any part of a day that is not a working day.

21. COMPANY SEALS

- 21.1** Model Article 49(1) is modified, such that any common seal of the Company may be used by the authority of the directors or any committee of directors.
- 21.2** Model Article 49(3) is modified by the deletion of all words which follow the "," after the word "document" and their replacement with "the document must also be signed by:-"

- (a) one authorised person in the presence of a witness who attests the signature; or
- (b) two authorised persons".

22. TRANSMISSION OF SHARES

- 22.1** Model Article 27 is modified by the addition of new Model Article 27(4) in the following terms:-

"Nothing in these Articles releases the estate of a deceased member from any liability in respect of a share solely or jointly held by that member".

- 22.2** All the Articles relating to the transfer of shares apply to:-

- (a) any notice in writing given to the Company by a transmittee in accordance with Model Article 28(1); and
- (b) any instrument of transfer executed by a transmittee in accordance with Model Article 28(2),

as if such notice or instrument were an instrument of transfer executed by the person from whom the transmittee derived rights in respect of the share, and as if the event which gave rise to the transmission had not occurred.

23. WINDING UP

- 23.1** If the Company is wound up, the liquidator may, with the sanction of a special resolution of the Company and any other sanction required by law, divide among the members in specie the whole or any part of the assets of the Company and may, for that purpose, value any assets and determine how the division shall be carried out as between the members or different classes of members. The liquidator may, with the like sanction, vest the whole or any part of the assets in trustees upon such trusts for the benefit of the members as he may determine, but no member shall be compelled to accept any assets upon which there is a liability.

24. SHARE TRANSFERS

- 24.1** (a) Model Article 26(1) is modified by the addition of the words "and, if any of the shares is nil or partly paid, the transferee" after the word "transferor".
- (b) The directors may refuse to register the transfer of a share, and, if they do so, the instrument of transfer must be returned to the transferee together with a notice of refusal giving reasons for such refusal as soon as practicable and in any event within two months after the date on which the instrument of transfer was lodged for registration, unless the directors suspect that the proposed transfer may be fraudulent.

The model articles of association for private companies limited by shares as contained in Schedule 1 to The Companies (Model Articles) Regulations 2008 (SI 2008 No. 3229) apply to the company save in so far as they are excluded or modified. These model articles of association for private companies limited by shares are reprinted without the index below.

Companies Act 2006

Model Articles

Private Company Limited by Shares

PART 1 - INTERPRETATION AND LIMITATION OF LIABILITY

Defined terms

1. In the articles, unless the context requires otherwise—

"articles" means the company's articles of association;

"bankruptcy" includes individual insolvency proceedings in a jurisdiction other than England and Wales or Northern Ireland which have an effect similar to that of bankruptcy;

"chairman" has the meaning given in article 12;

"chairman of the meeting" has the meaning given in article 39;

"Companies Acts" means the Companies Acts (as defined in section 2 of the Companies Act 2006), in so far as they apply to the company;

"director" means a director of the company, and includes any person occupying the position of director, by whatever name called;

"distribution recipient" has the meaning given in article 31;

"document" includes, unless otherwise specified, any document sent or supplied in electronic form;

"electronic form" has the meaning given in section 1168 of the Companies Act 2006;

"fully paid" in relation to a share, means that the nominal value and any premium to be paid to the company in respect of that share have been paid to the company;

"hard copy form" has the meaning given in section 1168 of the Companies Act 2006;

"holder" in relation to shares means the person whose name is entered in the register of members as the holder of the shares;

"instrument" means a document in hard copy form;

"ordinary resolution" has the meaning given in section 282 of the Companies Act 2006;

"paid" means paid or credited as paid;

"participate", in relation to a directors' meeting, has the meaning given in article 10;

"proxy notice" has the meaning given in article 45;

"shareholder" means a person who is the holder of a share;

"shares" means shares in the company;

"special resolution" has the meaning given in section 283 of the Companies Act 2006;

"subsidiary" has the meaning given in section 1159 of the Companies Act 2006;

"transmittee" means a person entitled to a share by reason of the death or bankruptcy of a shareholder or otherwise by operation of law; and

"writing" means the representation or reproduction of words, symbols or other information in a visible form by any method or combination of methods, whether sent or supplied in electronic form or otherwise.

Unless the context otherwise requires, other words or expressions contained in these articles bear the same meaning as in the Companies Act 2006 as in force on the date when these articles become binding on the company.

Liability of members

2. The liability of the members is limited to the amount, if any, unpaid on the shares held by them.

PART 2 - DIRECTORS

DIRECTORS' POWERS AND RESPONSIBILITIES

Directors' general authority

3. Subject to the articles, the directors are responsible for the management of the company's business, for which purpose they may exercise all the powers of the company.

Shareholders' reserve power

4. (1) The shareholders may, by special resolution, direct the directors to take, or refrain from taking, specified action.
- (2) No such special resolution invalidates anything which the directors have done before the passing of the resolution.

Directors may delegate

5. (1) Subject to the articles, the directors may delegate any of the powers which are conferred on them under the articles—
- (a) to such person or committee;
 - (b) by such means (including by power of attorney);
 - (c) to such an extent;
 - (d) in relation to such matters or territories; and
 - (e) on such terms and conditions;

as they think fit

- (2) If the directors so specify, any such delegation may authorise further delegation of the directors' powers by any person to whom they are delegated.
- (3) The directors may revoke any delegation in whole or part, or alter its terms and conditions.

Committees

6. (1) Committees to which the directors delegate any of their powers must follow procedures which are based as far as they are applicable on those provisions of the articles which govern the taking of decisions by directors.
- (2) The directors may make rules of procedure for all or any committees, which prevail over rules derived from the articles if they are not consistent with them.

DECISION MAKING BY DIRECTORS

Directors to take decisions collectively

7. (1) The general rule about decision-making by directors is that any decision of the directors must be either a majority decision at a meeting or a decision taken in accordance with article 8.
- (2) If—
- (a) the company only has one director, and
 - (b) no provision of the articles requires it to have more than one director,

the general rule does not apply, and the director may take decisions without regard to any of the provisions of the articles relating to directors' decision-making.

Unanimous decisions

8. (1) A decision of the directors is taken in accordance with this article when all eligible directors indicate to each other by any means that they share a common view on a matter.

- (2) Such a decision may take the form of a resolution in writing, copies of which have been signed by each eligible director or to which each eligible director has otherwise indicated agreement in writing.
- (3) References in this article to eligible directors are to directors who would have been entitled to vote on the matter had it been proposed as a resolution at a directors' meeting.
- (4) A decision may not be taken in accordance with this article if the eligible directors would not have formed a quorum at such a meeting.

Calling a directors' meeting

9. (1) Any director may call a directors' meeting by giving notice of the meeting to the directors or by authorising the company secretary (if any) to give such notice.
- (2) Notice of any directors' meeting must indicate—
 - (a) its proposed date and time;
 - (b) where it is to take place; and
 - (c) if it is anticipated that directors participating in the meeting will not be in the same place, how it is proposed that they should communicate with each other during the meeting.
- (3) Notice of a directors' meeting must be given to each director, but need not be in writing.
- (4) Notice of a directors' meeting need not be given to directors who waive their entitlement to notice of that meeting, by giving notice to that effect to the company not more than 7 days after the date on which the meeting is held. Where such notice is given after the meeting has been held, that does not affect the validity of the meeting, or of any business conducted at it.

Participation in directors' meetings

10. (1) Subject to the articles, directors participate in a directors' meeting, or part of a directors' meeting, when—
 - (a) the meeting has been called and takes place in accordance with the articles; and
 - (b) they can each communicate to the others any information or opinions they have on any particular item of the business of the meeting.
- (2) In determining whether directors are participating in a directors' meeting, it is irrelevant where any director is or how they communicate with each other.
- (3) If all the directors participating in a meeting are not in the same place, they may decide that the meeting is to be treated as taking place wherever any of them is.

Quorum for directors' meetings

11. (1) At a directors' meeting, unless a quorum is participating, no proposal is to be voted on, except a proposal to call another meeting.
- (2) The quorum for directors' meetings may be fixed from time to time by a decision of the directors, but it must never be less than two, and unless otherwise fixed it is two.
- (3) If the total number of directors for the time being is less than the quorum required, the directors must not take any decision other than a decision—
 - (a) to appoint further directors; or
 - (b) to call a general meeting so as to enable the shareholders to appoint further directors.

Chairing of directors' meetings

12. (1) The directors may appoint a director to chair their meetings.
- (2) The person so appointed for the time being is known as the chairman.
- (3) The directors may terminate the chairman's appointment at any time.
- (4) If the chairman is not participating in a directors' meeting within ten minutes of the time at which it was to start, the participating directors must appoint one of themselves to chair it.

Casting vote

13. (1) If the numbers of votes for and against a proposal are equal, the chairman or other director chairing the meeting has a casting vote.
- (2) But this does not apply if, in accordance with the articles, the chairman or other director is not to be counted as participating in the decision making process for quorum or voting purposes.

Conflicts of interest

14. (1) If a proposed decision of the directors is concerned with an actual or proposed transaction or arrangement with the company in which a director is interested, that director is not to be counted as participating in the decision making process for quorum or voting purposes.
- (2) But if paragraph (3) applies, a director who is interested in an actual or proposed transaction or arrangement with the company is to be counted as participating in the decision-making process for quorum and voting purposes.
- (3) This paragraph applies when—
 - (a) the company by ordinary resolution disapples the provision of the articles which would otherwise prevent a director from being counted as participating in the decision-making process;
 - (b) the director's interest cannot reasonably be regarded as likely to give rise to a conflict of interest; or
 - (c) the director's conflict of interest arises from a permitted cause.
- (4) For the purposes of this article, the following are permitted causes—
 - (a) a guarantee given, or to be given, by or to a director in respect of an obligation incurred by or on behalf of the company or any of its subsidiaries;
 - (b) subscription, or an agreement to subscribe, for shares or other securities of the company or any of its subsidiaries, or to underwrite, sub-underwrite, or guarantee subscription for any such shares or securities; and
 - (c) arrangements pursuant to which benefits are made available to employees and directors or former employees and directors of the company or any of its subsidiaries which do not provide special benefits for directors or former directors.
- (5) For the purposes of this article, references to proposed decisions and decision-making processes include any directors' meeting or part of a directors' meeting.
- (6) Subject to paragraph (7), if a question arises at a meeting of directors or of a committee of directors as to the right of a director to participate in the meeting (or part of the meeting) for voting or quorum purposes, the question may, before the conclusion of the meeting, be referred to the chairman whose ruling in relation to any director other than the chairman is to be final and conclusive.
- (7) If any question as to the right to participate in the meeting (or part of the meeting) should arise in respect of the chairman, the question is to be decided by a decision of the directors at that meeting, for which purpose the chairman is not to be counted as participating in the meeting (or that part of the meeting) for voting or quorum purposes.

Records of decisions to be kept

15. The directors must ensure that the company keeps a record, in writing for at least 10 years from the date of the decision recorded, of every unanimous or majority decision taken by the directors.

Directors' discretion to make further rules

16. Subject to the articles, the directors may make any rule which they think fit about how they take decisions, and about how such rules are to be recorded or communicated to directors.

APPOINTMENT OF DIRECTORS

Methods of appointing directors

17. (1) Any person who is willing to act as a director, and is permitted by law to do so, may be appointed to be a director—
 - (a) by ordinary resolution; or

(b) by a decision of the directors

(2) In any case where, as a result of death, the company has no shareholders and no directors, the personal representatives of the last shareholder to have died have the right, by notice in writing, to appoint a person to be a director.

(3) For the purposes of paragraph (2), where 2 or more shareholders die in circumstances rendering it uncertain who was the last to die, a younger shareholder is deemed to have survived an older shareholder.

Termination of director's appointment

18. A person ceases to be a director as soon as –

- (a) that person ceases to be a director by virtue of any provision of the Companies Act 2006 or is prohibited from being a director by law,
- (b) a bankruptcy order is made against that person,
- (c) a composition is made with that person's creditors generally in satisfaction of that person's debts;
- (d) a registered medical practitioner who is treating that person gives a written opinion to the company stating that that person has become physically or mentally incapable of acting as a director and may remain so for more than three months;
- (e) *by reason of that person's mental health, a court makes an order which wholly or partly prevents that person from personally exercising any powers or rights which that person would otherwise have.*¹
- (f) notification is received by the company from the director that the director is resigning from office, and such resignation has taken effect in accordance with its terms.

Directors' remuneration

19. (1) Directors may undertake any services for the company that the directors decide.
- (2) Directors are entitled to such remuneration as the directors determine –
- (a) for their services to the company as directors, and
 - (b) for any other service which they undertake for the company.
- (3) Subject to the articles, a director's remuneration may –
- (a) take any form, and
 - (b) include any arrangements in connection with the payment of a pension, allowance or gratuity, or any death, sickness or disability benefits, to or in respect of that director
- (4) Unless the directors decide otherwise, directors' remuneration accrues from day to day.
- (5) Unless the directors decide otherwise, directors are not accountable to the company for any remuneration which they receive as directors or other officers or employees of the company's subsidiaries or of any other body corporate in which the company is interested.

Directors' expenses

20. The company may pay any reasonable expenses which the directors properly incur in connection with their attendance at –

- (a) meetings of directors or committees of directors,
- (b) general meetings, or
- (c) separate meetings of the holders of any class of shares or of debentures of the company,

or otherwise in connection with the exercise of their powers and the discharge of their responsibilities in relation to the company.

PART 3 - SHARES AND DISTRIBUTIONS

SHARES

All shares to be fully paid up

21. (1) No share is to be issued for less than the aggregate of its nominal value and any premium to be paid to the company in consideration for its issue.
- (2) This does not apply to shares taken on the formation of the company by the subscribers to the company's memorandum.

Powers to issue different classes of share

22. (1) Subject to the articles, but without prejudice to the rights attached to any existing share, the company may issue shares with such rights or restrictions as may be determined by ordinary resolution.
- (2) The company may issue shares which are to be redeemed, or are liable to be redeemed at the option of the company or the holder, and the directors may determine the terms, conditions and manner of redemption of any such shares.

Company not bound by less than absolute interests

23. Except as required by law, no person is to be recognised by the company as holding any share upon any trust, and except as otherwise required by law or the articles, the company is not in any way to be bound by or recognise any interest in a share other than the holder's absolute ownership of it and all the rights attaching to it.

Share certificates

24. (1) The company must issue each shareholder, free of charge, with one or more certificates in respect of the shares which that shareholder holds.
- (2) Every certificate must specify –
- (a) in respect of how many shares, of what class, it is issued;
 - (b) the nominal value of those shares;
 - (c) that the shares are fully paid; and
 - (d) any distinguishing numbers assigned to them.
- (3) No certificate may be issued in respect of shares of more than one class.
- (4) If more than one person holds a share, only one certificate may be issued in respect of it.
- (5) Certificates must –
- (a) have affixed to them the company's common seal, or
 - (b) be otherwise executed in accordance with the Companies Acts.

Replacement share certificates

25. (1) If a certificate issued in respect of a shareholder's shares is –
- (a) damaged or defaced, or
 - (b) said to be lost, stolen or destroyed,
- that shareholder is entitled to be issued with a replacement certificate in respect of the same shares.
- (2) A shareholder exercising the right to be issued with such a replacement certificate –
- (a) may at the same time exercise the right to be issued with a single certificate or separate certificates;
 - (b) must return the certificate which is to be replaced to the company if it is damaged or defaced; and
 - (c) must comply with such conditions as to evidence, indemnity and the payment of a reasonable fee as the directors decide.

Share transfers

26. (1) Shares may be transferred by means of an instrument of transfer in any usual form or any other form approved by the directors, which is executed by or on behalf of the transferor
- (2) No fee may be charged for registering any instrument of transfer or other document relating to or affecting the title to any share.
- (3) The company may retain any instrument of transfer which is registered.

¹ The Mental Health (Discrimination) Act 2013 provides that 18(e) is omitted as from 28 April 2013.

- (4) The transferor remains the holder of a share until the transferee's name is entered in the register of members as holder of it.
- (5) The directors may refuse to register the transfer of a share, and if they do so, the instrument of transfer must be returned to the transferee with the notice of refusal unless they suspect that the proposed transfer may be fraudulent.

Transmission of shares

27. (1) If title to a share passes to a transferee, the company may only recognise the transferee as having any title to that share.
- (2) A transferee who produces such evidence of entitlement to shares as the directors may properly require—
 - (a) may, subject to the articles, choose either to become the holder of those shares or to have them transferred to another person, and
 - (b) subject to the articles, and pending any transfer of the shares to another person, has the same rights as the holder had
- (3) But transferees do not have the right to attend or vote at a general meeting, or agree to a proposed written resolution, in respect of shares to which they are entitled, by reason of the holder's death or bankruptcy or otherwise, unless they become the holders of those shares

Exercise of transferees' rights

28. (1) Transferees who wish to become the holders of shares to which they have become entitled must notify the company in writing of that wish.
- (2) If the transferee wishes to have a share transferred to another person, the transferee must execute an instrument of transfer in respect of it.
- (3) Any transfer made or executed under this article is to be treated as if it were made or executed by the person from whom the transferee has derived rights in respect of the share, and as if the event which gave rise to the transmission had not occurred.

Transferees bound by prior notices

29. If a notice is given to a shareholder in respect of shares and a transferee is entitled to those shares, the transferee is bound by the notice if it was given to the shareholder before the transferee's name has been entered in the register of members

DIVIDENDS AND OTHER DISTRIBUTIONS

Procedure for declaring dividends

30. (1) The company may by ordinary resolution declare dividends, and the directors may decide to pay interim dividends.
- (2) A dividend must not be declared unless the directors have made a recommendation as to its amount. Such a dividend must not exceed the amount recommended by the directors.
- (3) No dividend may be declared or paid unless it is in accordance with shareholders' respective rights.
- (4) Unless the shareholders' resolution to declare or directors' decision to pay a dividend, or the terms on which shares are issued, specify otherwise, it must be paid by reference to each shareholder's holding of shares on the date of the resolution or decision to declare or pay it
- (5) If the company's share capital is divided into different classes, no interim dividend may be paid on shares carrying deferred or non-preferred rights if, at the time of payment, any preferential dividend is in arrear
- (6) The directors may pay at intervals any dividend payable at a fixed rate if it appears to them that the profits available for distribution justify the payment.
- (7) If the directors act in good faith, they do not incur any liability to the holders of shares conferring preferred rights for any loss they may suffer by the lawful payment of an interim dividend on shares with deferred or non preferred rights.

Payment of dividends and other distributions

31. (1) Where a dividend or other sum which is a distribution is payable in respect of a share, it must be paid by one or more of the following means—

- (a) transfer to a bank or building society account specified by the distribution recipient either in writing or as the directors may otherwise decide;
 - (b) sending a cheque made payable to the distribution recipient by post to the distribution recipient at the distribution recipient's registered address (if the distribution recipient is a holder of the share), or (in any other case) to an address specified by the distribution recipient either in writing or as the directors may otherwise decide.
 - (c) sending a cheque made payable to such person by post to such person at such address as the distribution recipient has specified either in writing or as the directors may otherwise decide, or
 - (d) any other means of payment as the directors agree with the distribution recipient either in writing or by such other means as the directors decide.
- (2) In the articles, "the distribution recipient" means, in respect of a share in respect of which a dividend or other sum is payable—
 - (a) the holder of the share, or
 - (b) if the share has two or more joint holders, whichever of them is named first in the register of members, or
 - (c) if the holder is no longer entitled to the share by reason of death or bankruptcy, or otherwise by operation of law, the transferee.

No interest on distributions

32. The company may not pay interest on any dividend or other sum payable in respect of a share unless otherwise provided by—

- (a) the terms on which the share was issued, or
- (b) the provisions of another agreement between the holder of that share and the company.

Unclaimed distributions

33. (1) All dividends or other sums which are—
 - (a) payable in respect of shares, and
 - (b) unclaimed after having been declared or become payable,may be invested or otherwise made use of by the directors for the benefit of the company until claimed.
- (2) The payment of any such dividend or other sum into a separate account does not make the company a trustee in respect of it.
- (3) If—
 - (a) twelve years have passed from the date on which a dividend or other sum became due for payment, and
 - (b) the distribution recipient has not claimed it,the distribution recipient is no longer entitled to that dividend or other sum and it ceases to remain owing by the company.

Non-cash distributions

34. (1) Subject to the terms of issue of the share in question, the company may, by ordinary resolution on the recommendation of the directors, decide to pay all or part of a dividend or other distribution payable in respect of a share by transferring non-cash assets of equivalent value (including, without limitation, shares or other securities in any company).
- (2) For the purposes of paying a non-cash distribution, the directors may make whatever arrangements they think fit, including, where any difficulty arises regarding the distribution—
 - (a) fixing the value of any assets;
 - (b) paying cash to any distribution recipient on the basis of that value in order to adjust the rights of recipients; and
 - (c) vesting any assets in trustees.

Waiver of distributions

35. Distribution recipients may waive their entitlement to a dividend or other distribution payable in respect of a share by giving the company notice in writing to that effect, but if—

- (a) the share has more than one holder, or

- (b) more than one person is entitled to the share, whether by reason of the death or bankruptcy of one or more joint holders, or otherwise.

the notice is not effective unless it is expressed to be given, and signed, by all the holders or persons otherwise entitled to the share.

CAPITALISATION OF PROFITS

Authority to capitalise and appropriation of capitalised sums

36. (1) Subject to the articles, the directors may, if they are so authorised by an ordinary resolution—
- (a) decide to capitalise any profits of the company (whether or not they are available for distribution) which are not required for paying a preferential dividend, or any sum standing to the credit of the company's share premium account or capital redemption reserve; and
 - (b) appropriate any sum which they so decide to capitalise (a "capitalised sum") to the persons who would have been entitled to it if it were distributed by way of dividend (the "persons entitled") and in the same proportions.
- (2) Capitalised sums must be applied—
- (a) on behalf of the persons entitled, and
 - (b) in the same proportions as a dividend would have been distributed to them.
- (3) Any capitalised sum may be applied in paying up new shares of a nominal amount equal to the capitalised sum which are then allotted credited as fully paid to the persons entitled or as they may direct.
- (4) A capitalised sum which was appropriated from profits available for distribution may be applied in paying up new debentures of the company which are then allotted credited as fully paid to the persons entitled or as they may direct.
- (5) Subject to the articles the directors may—
- (a) apply capitalised sums in accordance with paragraphs (3) and (4) partly in one way and partly in another;
 - (b) make such arrangements as they think fit to deal with shares or debentures becoming distributable in fractions under this article (including the issue of fractional certificates or the making of cash payments); and
 - (c) authorise any person to enter into an agreement with the company on behalf of all the persons entitled which is binding on them in respect of the allotment of shares and debentures to them under this article.

PART 4 - DECISION-MAKING BY SHAREHOLDERS

ORGANISATION OF GENERAL MEETINGS

Attendance and speaking at general meetings

37. (1) A person is able to exercise the right to speak at a general meeting when that person is in a position to communicate to all those attending the meeting, during the meeting, any information or opinions which that person has on the business of the meeting.
- (2) A person is able to exercise the right to vote at a general meeting when—
- (a) that person is able to vote, during the meeting, on resolutions put to the vote at the meeting; and
 - (b) that person's vote can be taken into account in determining whether or not such resolutions are passed at the same time as the votes of all the other persons attending the meeting.
- (3) The directors may make whatever arrangements they consider appropriate to enable those attending a general meeting to exercise their rights to speak or vote at it.
- (4) In determining attendance at a general meeting, it is immaterial whether any two or more members attending it are in the same place as each other.
- (5) Two or more persons who are not in the same place as each other attend a general meeting if their circumstances are such that if they have (or were to have) rights to speak and vote at that meeting, they are (or would be) able to exercise them.

Quorum for general meetings

38. No business other than the appointment of the chairman of the meeting is to be transacted at a general meeting if the persons attending it do not constitute a quorum.

Chairing general meetings

39. (1) If the directors have appointed a chairman, the chairman shall chair general meetings if present and willing to do so.
- (2) If the directors have not appointed a chairman, or if the chairman is unwilling to chair the meeting or is not present within ten minutes of the time at which a meeting was due to start—
- (a) the directors present, or
 - (b) (if no directors are present), the meeting,
- must appoint a director or shareholder to chair the meeting, and the appointment of the chairman of the meeting must be the first business of the meeting.
- (3) The person chairing a meeting in accordance with this article is referred to as "the chairman of the meeting".

Attendance and speaking by directors and non-shareholders

40. (1) Directors may attend and speak at general meetings, whether or not they are shareholders.
- (2) The chairman of the meeting may permit other persons who are not—
- (a) shareholders of the company, or
 - (b) otherwise entitled to exercise the rights of shareholders in relation to general meetings,
- to attend and speak at a general meeting.

Adjournment

41. (1) If the persons attending a general meeting within half an hour of the time at which the meeting was due to start do not constitute a quorum, or if during a meeting a quorum ceases to be present, the chairman of the meeting must adjourn it.
- (2) The chairman of the meeting may adjourn a general meeting at which a quorum is present if—
- (a) the meeting consents to an adjournment, or
 - (b) it appears to the chairman of the meeting that an adjournment is necessary to protect the safety of any person attending the meeting or ensure that the business of the meeting is conducted in an orderly manner.
- (3) The chairman of the meeting must adjourn a general meeting if directed to do so by the meeting.
- (4) When adjourning a general meeting, the chairman of the meeting must—
- (a) either specify the time and place to which it is adjourned or state that it is to continue at a time and place to be fixed by the directors; and
 - (b) have regard to any directions as to the time and place of any adjournment which have been given by the meeting.
- (5) If the continuation of an adjourned meeting is to take place more than 14 days after it was adjourned, the company must give at least 7 clear days' notice of it (that is, excluding the day of the adjourned meeting and the day on which the notice is given)—
- (a) to the same persons to whom notice of the company's general meetings is required to be given; and
 - (b) containing the same information which such notice is required to contain.
- (6) No business may be transacted at an adjourned general meeting which could not properly have been transacted at the meeting if the adjournment had not taken place.

VOTING AT GENERAL MEETINGS

Voting: general

42. A resolution put to the vote of a general meeting must be decided on a show of hands unless a poll is duly demanded in accordance with the articles.

Errors and disputes

43. (1) No objection may be raised to the qualification of any person voting at a general meeting except at the meeting or adjourned meeting at which the vote objected to is tendered, and every vote not disallowed at the meeting is valid.
- (2) Any such objection must be referred to the chairman of the meeting, whose decision is final.

Poll votes

44. (1) A poll on a resolution may be demanded—
- (a) in advance of the general meeting where it is to be put to the vote, or
 - (b) at a general meeting, either before a show of hands on that resolution or immediately after the result of a show of hands on that resolution is declared.
- (2) A poll may be demanded by—
- (a) the chairman of the meeting;
 - (b) the directors;
 - (c) two or more persons having the right to vote on the resolution, or
 - (d) a person or persons representing not less than one tenth of the total voting rights of all the shareholders having the right to vote on the resolution.
- (3) A demand for a poll may be withdrawn if—
- (a) the poll has not yet been taken, and
 - (b) the chairman of the meeting consents to the withdrawal.
- (4) Polls must be taken immediately and in such manner as the chairman of the meeting directs.

Content of proxy notices

45. (1) Proxies may only validly be appointed by a notice in writing (a "proxy notice") which—
- (a) states the name and address of the shareholder appointing the proxy;
 - (b) identifies the person appointed to be that shareholder's proxy and the general meeting in relation to which that person is appointed;
 - (c) is signed by or on behalf of the shareholder appointing the proxy, or is authenticated in such manner as the directors may determine; and
 - (d) is delivered to the company in accordance with the articles and any instructions contained in the notice of the general meeting to which they relate.
- (2) The company may require proxy notices to be delivered in a particular form, and may specify different forms for different purposes.
- (3) Proxy notices may specify how the proxy appointed under them is to vote (or that the proxy is to abstain from voting) on one or more resolutions.
- (4) Unless a proxy notice indicates otherwise, it must be treated as—
- (a) allowing the person appointed under it as a proxy discretion as to how to vote on any ancillary or procedural resolutions put to the meeting, and
 - (b) appointing that person as a proxy in relation to any adjournment of the general meeting to which it relates as well as the meeting itself.

Delivery of proxy notices

46. (1) A person who is entitled to attend, speak or vote (either on a show of hands or on a poll) at a general meeting remains so entitled in respect of that meeting or any adjournment of it, even though a valid proxy notice has been delivered to the company by or on behalf of that person.
- (2) An appointment under a proxy notice may be revoked by delivering to the company a notice in writing given by or on

behalf of the person by whom or on whose behalf the proxy notice was given.

- (3) A notice revoking a proxy appointment only takes effect if it is delivered before the start of the meeting or adjourned meeting to which it relates.
- (4) If a proxy notice is not executed by the person appointing the proxy, it must be accompanied by written evidence of the authority of the person who executed it to execute it on the appointor's behalf.

Amendments to resolutions

47. (1) An ordinary resolution to be proposed at a general meeting may be amended by ordinary resolution if—
- (a) notice of the proposed amendment is given to the company in writing by a person entitled to vote at the general meeting at which it is to be proposed not less than 48 hours before the meeting is to take place (or such later time as the chairman of the meeting may determine), and
 - (b) the proposed amendment does not, in the reasonable opinion of the chairman of the meeting, materially alter the scope of the resolution.
- (2) A special resolution to be proposed at a general meeting may be amended by ordinary resolution, if—
- (a) the chairman of the meeting proposes the amendment at the general meeting at which the resolution is to be proposed, and
 - (b) the amendment does not go beyond what is necessary to correct a grammatical or other non-substantive error in the resolution.
- (3) If the chairman of the meeting, acting in good faith, wrongly decides that an amendment to a resolution is out of order, the chairman's error does not invalidate the vote on that resolution.

PART 5 - ADMINISTRATIVE ARRANGEMENTS

Means of communication to be used

48. (1) Subject to the articles, anything sent or supplied by or to the company under the articles may be sent or supplied in any way in which the Companies Act 2006 provides for documents or information which are authorised or required by any provision of that Act to be sent or supplied by or to the company.
- (2) Subject to the articles, any notice or document to be sent or supplied to a director in connection with the taking of decisions by directors may also be sent or supplied by the means by which that director has asked to be sent or supplied with such notices or documents for the time being.
- (3) A director may agree with the company that notices or documents sent to that director in a particular way are to be deemed to have been received within a specified time of their being sent, and for the specified time to be less than 48 hours.

Company seals

49. (1) Any common seal may only be used by the authority of the directors.
- (2) The directors may decide by what means and in what form any common seal is to be used.
- (3) Unless otherwise decided by the directors, if the company has a common seal and it is affixed to a document, the document must also be signed by at least one authorised person in the presence of a witness who attests the signature.
- (4) For the purposes of this article, an authorised person is—
- (a) any director of the company;
 - (b) the company secretary (if any); or
 - (c) any person authorised by the directors for the purpose of signing documents to which the common seal is applied.

No right to inspect accounts and other records

50. Except as provided by law or authorised by the directors or an ordinary resolution of the company, no person is entitled to inspect any of the company's accounting or other records or documents merely by virtue of being a shareholder.

Provision for employees on cessation of business

51. The directors may decide to make provision for the benefit of persons employed or formerly employed by the company or any of its subsidiaries (other than a director or former director or shadow director) in connection with the cessation or transfer to any person of the whole or part of the undertaking of the company or that subsidiary.

DIRECTORS' INDEMNITY AND INSURANCE

Indemnity

52. (1) Subject to paragraph (2), a relevant director of the company or an associated company may be indemnified out of the company's assets against—
- (a) any liability incurred by that director in connection with any negligence, default, breach of duty or breach of trust in relation to the company or an associated company,
 - (b) any liability incurred by that director in connection with the activities of the company or an associated company in its capacity as a trustee of an occupational pension scheme (as defined in section 235(8) of the Companies Act 2006),
 - (c) any other liability incurred by that director as an officer of the company or an associated company.
- (2) This article does not authorise any indemnity which would be prohibited or rendered void by any provision of the Companies Acts or by any other provision of law.
- (3) In this article—
- (a) companies are associated if one is a subsidiary of the other or both are subsidiaries of the same body corporate, and
 - (b) a "relevant director" means any director or former director of the company or an associated company.

Insurance

53. (1) The directors may decide to purchase and maintain insurance, at the expense of the company, for the benefit of any relevant director in respect of any relevant loss.
- (2) In this article—
- (a) a "relevant director" means any director or former director of the company or an associated company,
 - (b) a "relevant loss" means any loss or liability which has been or may be incurred by a relevant director in connection with that director's duties or powers in relation to the company, any associated company or any pension fund or employees' share scheme of the company or associated company, and
 - (c) companies are associated if one is a subsidiary of the other or both are subsidiaries of the same body corporate.



THE COMPANIES ACT 2006

Company No. NI 631407

The Registrar of Companies for Northern Ireland hereby certifies that HANWECK ASSOCIATES LIMITED was incorporated under the Companies Act 2006 as a limited company on 20th May 2015.

The Registrar further certifies that according to the documents on the file of the company:-

- a) GERALD ALFRED HANWECK, JR. and MICHAEL RINEHART HOLLINGSWORTH are the directors of the company,
- b) MICHAEL RINEHART HOLLINGSWORTH is the secretary of the company,
- c) the situation of the registered office is 42-46 FOUNTAIN STREET, BELFAST, NORTHERN IRELAND, UNITED KINGDOM BT1 5EF,
- d) the company has unrestricted objects.

According to the documents on file and in the custody of the Registrar, the company is up to date with its filing requirements and has at least 1 director, who is a natural person over the age of 16.

The company has been in continuous unbroken existence since its incorporation and no action is currently being taken by the Registrar of Companies to strike the company off the register or to dissolve it as defunct. As far as the Registrar is aware, the company is not in liquidation or subject to an administration order, and no receiver or manager of the company's property has been appointed.*****

Given at Companies House, the 27th January 2020

G BRIMACOMBE
for the Registrar of Companies

This certificate records the result of a search of the information registered by the Registrar. This information derives from filings accepted in good faith without verification. For this reason the Registrar cannot guarantee that the information on the register is accurate or complete.



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
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	312-804-8000	Clearing, Transact Business with the Public, Brokerage
ACS Execution Services, LLC	1/15/2018	1/15/2018	1/15/2018	1/15/2018	NA	NA	Member TPH	12 Broad Street 2nd Floor Red Bank, NJ 07701	732-204-8999	Proprietary Trading
Agency Desk, LLC	7/1/2009	NA	NA	NA	NA	NA	Member TPH	580 Madison Avenue 21st Floor New York, NY 10022	212-935-9835	Market Maker
Alura Securities LLC	9/15/2015	NA	NA	8/14/2017	2/2/2012	2/12/2015	Member TPH	333 S Wabash Avenue Suite 2800 Chicago, IL 60604	312-994-4840	Market Maker, Proprietary Trading
All Rise Trading LLC	NA	NA	NA	NA	8/14/2018	NA	Member TPH	141 W. Jackson Blvd., 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	858-947-8850	Proprietary Trading
Alpha Trading, LP	10/24/2017	10/24/2017	10/24/2017	10/24/2017	NA	NA	Member TPH	840 W California Avenue Sunnyvale, CA 94088	408-860-1940	Market Maker, Proprietary Trading
Alpha Trading, LP	2/22/2019	2/22/2019	2/22/2019	2/22/2019	NA	NA	Member TPH	840 W California Avenue Sunnyvale, CA 94088	408-860-1940	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	8/5/2019	Member TPH	Strawinskylaan 3085 Amsterdam, 1077ZX Netherlands	31-020-708-7000	Proprietary Trading
Apex Clearing Corporation	6/5/2012	6/5/2012	6/5/2012	6/5/2012	8/8/2012	8/8/2012	Member TPH	One Dallas Center 350 N St. Paul, Suite 1300 Dallas, TX 75201	214-785-1055	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 8th 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	589 Lexington Avenue 21st Floor New York, NY 10022	646-582-1010	Public Customer Business
Axe Financial LLC	10/15/2009	NA	NA	NA	NA	NA	Member TPH	1200 Landmark Center 1200 Fernon Street Suite 800 Omaha, NE 68102	402-384-6100	Clearing Services
Bancays Capital Inc.	8/18/2008	10/1/2010	5/14/2010	5/14/2010	9/22/2008	10/8/2010	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	10/18/2018	1/3/2006	4/4/2011	Member TPH	10 S Riverside Plaza Suite 2100 Chicago, IL 60606	312-863-3750	Market Maker, Proprietary Trading
BGC Financial, LP	8/17/2009	NA	NA	NA	NA	NA	Member TPH	One Seaport Plaza 10th Floor New York, NY 10038	646-346-7000	Agency
Bluefin Capital Management, LLC	8/3/2009	8/1/2015	9/27/2013	8/13/2013	4/27/2009	NA	Member TPH	3 Park Avenue 37th Floor New York, NY 10018	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	212-865-4000	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	1/5/2006	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
Boorboel 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 2080 Chicago, IL 60654	708-987-8843	Market Maker
Boorboel Capital LLC	1/30/2019	1/30/2019	1/30/2019	1/30/2019	NA	NA	Sponsored Participant	300 N LaSalle Street Suite 2080 Chicago, IL 60654	708-987-8843	Market Maker
Boorboel Trading LP	10/15/2018	10/15/2018	10/15/2018	10/15/2018	NA	NA	Sponsored Participant	Maples Corporate Services PO Box 300, Upland House Cayman Islands KY1-1104	#####	Proprietary Trading
BoiA 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	201-671-5885	Clearing Services, Firm Proprietary Trading, Public Customer Business
BTIG, LLC	8/18/2008	11/15/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	800 Montgomery Street 8th 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	8/10/2010	8/10/2010	NA	NA	Member TPH	535 Madison Avenue New York, NY 10022	212-399-8000	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	212-858-3877	Proprietary Trading
Cantor Fitzgerald & Co.	10/23/2008	2/13/2015	5/25/2010	5/27/2010	NA	NA	Member TPH	110 E 60th Street 4th Floor New York, NY 10022	212-838-5000	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
Choe Trading, Inc.	10/23/2008	9/1/2010	5/14/2010	5/14/2010	7/28/2019	4/18/2018	Member TPH	8050 Marshall Drive Suite 120 Lenexa, KS 66214	913-815-7000	Limited Routing Facility of Choe affiliated Exchanges
CF Global Trading, LLC	10/23/2008	1/3/2011	NA	NA	NA	NA	Member TPH	80 E 42nd Street Suite 1465 New York, NY 10185	212-888-4711	Market Maker
Charles Schwab & Co., Inc.	NA	NA	NA	4/3/2017	N/A	NA	Member TPH	211 Main Street San Francisco, CA 94105	415-636-7000	Clearing, Transact Business with the Public
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	212-858-4000	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	312-365-2100	Market Maker, Order Flow Provider, Brokerage
Citigroup Derivatives Markets Inc.	2/15/2018	NA	NA	2/15/2018	12/3/2004	2/25/2011	Member TPH	130 Cheeshe Lane Suite 102 Minneapolis, MN 55305	212-723-2980	Market Maker

Company Name	BDX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Effective Date	G2 Effective Date	Type of User	Address	Phone Number	Primary Activities
Citigroup Global Markets Inc.	9/24/2008	12/15/2010	5/25/2010	5/27/2010	5/2/2011	8/3/2019	Member TPH	300-386 Greenwich Street New York, NY 10013	212-818-8000	Clearing, Proprietary Trading, Transact Business with the Public
Clarksons Platau 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	7/18/2012	7/18/2012	8/20/2012	8/20/2012	8/8/2012	3/22/2019	Member TPH	55 Broadway Suite 2102 New York, NY 10008	646-738-4088	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 10008	646-738-4088	Public Customer Business, Clearing, Proprietary Trading
Clearpool Execution Services, LLC	5/15/2014	5/15/2014	8/18/2014	8/18/2014	NA	NA	Member TPH	17 State Street 38th Floor New York, NY 10004	212-531-8500	Public Customer Business
CMT Fund XIV Limited	7/2/2012	7/2/2012	NA	NA	NA	NA	Sponsored Participant	500 W Monroe Street Suite 2630 Chicago, IL 60661	312-320-7897	Agency
CMT Trading LLC	3/17/2014	3/17/2014	3/5/2014	3/5/2014	NA	NA	Member TPH	500 W Monroe Street Suite 2630 Chicago, IL 60661	312-930-9050	Market Maker, Proprietary Trading
CODA Markets, Inc.	10/15/2008	10/4/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	2624 Patriot Boulevard Glenview, IL 60028	224-521-2700	ATS
Cognitive Capital, LLC	NA	NA	NA	NA	5/13/2004	NA	Member TPH	141 W Jackson Boulevard Suite 1820 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	312-380-7300	Market Maker
Cowen and Company, LLC	8/18/2008	10/7/2010	5/14/2010	5/14/2010	NA	NA	Member TPH	589 Lexington Avenue 20th Floor New York, NY 10022	646-562-1010	Market Maker
Cowen Execution Services LLC	10/15/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member TPH	1633 Broadway 44th Floor New York, NY 10019	800-367-8898	Full Service
Cowen Prime Services LLC	3/15/2011	3/15/2011	NA	NA	NA	NA	Member TPH	589 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	8/8/2018	NA	8/8/2018	NA	NA	Member TPH	120 W 48th Street 15th Floor New York, NY 10036	646-918-0529	Market Maker, Proprietary Trading
CSS, LLC	NA	NA	NA	NA	8/21/1988	NA	Member TPH	175 W Jackson Boulevard Suite 440 Chicago, IL 60604	312-542-8505	Proprietary Trading
CTC, LLC	3/15/2018	NA	NA	NA	3/25/1988	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	10/18/2015	4/5/1989	12/4/2019	Member TPH	101 Montgomery Street Suite 700 San Francisco, CA 94104	415-293-3556	Market Maker, Proprietary Trading
Dash Financial Technologies LLC	10/23/2008	7/2/2012	8/9/2010	8/9/2010	5/19/2000	9/30/2010	Member TPH	311 S Wacker Drive Suite 1000 Chicago, IL 60606	312-888-2008	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	4/25/1988	8/15/2011	Member TPH	80 Wall Street New York, NY 10005	212-250-2500	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
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 Securities, LLC	9/1/2009	11/1/2010	5/25/2010	5/27/2010	11/23/1998	1/22/2018	Member TPH	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1000	Market Maker, 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 018980	312-542-1005	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 230828	858-810-4893	Proprietary Trading
E D & F Man Capital Markets Inc.	NA	NA	NA	NA	3/1/2019	8/7/2019	Member TPH	140 E. 48th Street 10th Floor New York, NY 10017	212-618-2800	Clearing, Public Customer Business
E*TRADE Securities LLC	NA	NA	NA	8/10/2010	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	980 S Figueroa Street Los Angeles, CA 90017	949-533-1865	Market Maker
Evercore Group LLC	NA	NA	5/10/2017	NA	NA	NA	Member TPH	55 E 52nd Street New York, NY 10055	212-857-3100	Public Customer Business
FIS Brokerage & Securities Services LLC	8/18/2008	10/1/2010	5/6/2010	5/6/2010	NA	NA	Member TPH	2100 Enterprise Avenue Geneva, IL 60134	630-482-7100	Agency
Flow Traders U.S. Institutional Trading LLC	NA	NA	8/1/2016	NA	NA	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Registered Principal
Flow Traders U.S. LLC	10/1/2009	8/1/2012	2/28/2014	2/28/2014	8/31/2010	NA	Member TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Proprietary Trading
G1 Execution Services, LLC	8/18/2008	12/1/2010	4/17/2010	4/17/2010	NA	NA	Member TPH	175 W Jackson Boulevard Suite 1700 Chicago, IL 60604	312-362-0404	Market Maker
Gair Loch Enterprises Ltd.	2/22/2019	2/22/2019	4/8/2019	4/8/2019	NA	NA	Member TPH	540 W. Madison Suite 2500 Chicago, IL 60661	312-542-1193	Proprietary Trading
Gair Loch Enterprises Ltd.	12/2/2019	12/2/2019	12/2/2019	12/2/2019	NA	NA	Member TPH	540 W. Madison Suite 2500 Chicago, IL 60661	312-542-1193	Proprietary Trading
Geneva Stock, LLC	NA	NA	NA	NA	4/8/2001	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	610-617-2800	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	5/2/2018	NA	NA	Member TPH	441 Lexington Avenue 10th Floor New York, NY 10017	212-883-0800	Agency, Institutional Trading
Group One Trading, LP	8/2/2015	NA	NA	9/29/2015	11/23/1984	NA	Member TPH	440 S LaSalle Street Suite 3232 Chicago, IL 60605	312-347-8884	Market Maker
GTS Securities LLC	12/17/2013	5/1/2012	8/2/2014	8/2/2014	11/28/2019	NA	Member TPH	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Market Maker, Proprietary Trading

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Hainey Investments Limited	8/18/2014	NA	NA	NA	NA	NA	Sponsored Participant	Thermistold Drive 41 #808-807 Nicola, Cyprus	704-248-8221	Proprietary Trading
HAP Trading LLC	10/1/2009	11/15/2010	NA	6/2/2010	3/18/2001	NA	Member TPH	385 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	385 Hudson Street Suite 701 New York, NY 10014	212-380-5100	Proprietary Trading
Hardcastle Trading USA LLC	4/15/2009	NA	5/25/2010	5/27/2010	5/18/2005	NA	Member TPH	785 Secaucus Road Suite F-1110 Secaucus, NJ 07094	201-305-8888	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	312-601-8848	Proprietary Trading
Hahnemeyer, LLC	10/3/2016	10/3/2016	10/3/2016	10/3/2016	NA	NA	Sponsored Participant	801 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	312-788-8784	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	212-287-4800	Proprietary Trading
Hilltop Securities Inc.	10/23/2008	8/1/2010	NA	5/21/2013	10/1/2010	NA	Member TPH	1201 Elm Street Suite 3500 Dallas, TX 75270	214-859-1800	Clearing, Transact Business with the Public
HRT Financial LLC	2/1/2010	10/1/2010	5/18/2010	5/18/2010	1/24/2011	1/24/2011	Member TPH	4 World Trade Center 150 Greenwich Street, 57th Floor New York, NY 10007	212-293-1444	Proprietary Trading
HSBC Securities (USA) Inc.	4/3/2017	4/3/2017	4/3/2017	4/3/2017	11/21/2005	NA	Member TPH	452 Fifth Avenue New York, NY 10018	224-880-7116	Clearing, Transact Business with the Public
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	848-343-2000	Limited Routing Facility of IEX affiliated Exchanges
IMC-Chicago LLC d/b/a IMC Financial Markets	8/18/2008	10/1/2010	5/25/2010	5/27/2010	7/5/2000	9/24/2010	Member TPH	233 S Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3300	Market Maker, Proprietary Trading
IMC-Chicago LLC d/b/a IMC Financial Markets	11/5/2018	11/5/2018	11/5/2018	11/5/2018	NA	NA	Sponsored Participant	233 S Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3300	Market Maker, Proprietary Trading
Industrial and Commercial Bank of China Financial Services LLC	5/15/2014	5/15/2014	NA	NA	NA	NA	Member TPH	1533 Broadway 28th Floor New York, NY 10019	212-693-7300	Clearing Services
Instinet LLC	8/18/2008	9/1/2010	5/14/2010	5/14/2010	12/29/2009	10/8/2010	Member TPH	Worldwide Plaza 209 W 48th 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	10/8/2010	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 Picnic 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	848-759-8000	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	848-759-6381	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	848-759-8000	Market Maker
Jefferies Investment Advisors	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	212-294-2300	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
Julist Group, LLC	3/1/2011	3/1/2011	NA	NA	NA	NA	Sponsored Participant	240 E 35th Street #3A New York, NY 10016	848-380-0585	Proprietary Trading
Julist Labs, LLC	9/20/2017	9/20/2017	9/20/2017	9/20/2017	NA	NA	Sponsored Participant	1 Northside Plaza Suite 14H Brooklyn, NY 11249	848-380-0585	Proprietary Trading
Jump Trading, LLC	8/18/2008	10/1/2010	5/14/2010	5/14/2010	4/2/2012	8/8/2017	Member TPH	800 W Chicago Avenue Suite 825 Chicago, IL 60654	312-205-8800	Market Maker, Proprietary Trading
Keefe, Bruyette & Woods, Inc.	8/18/2008	12/1/2010	8/8/2010	8/8/2010	NA	NA	Member TPH	787 7th Avenue New York, NY 10019	212-867-7777	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	312-380-7300	Market Maker
Lampert Capital Markets Inc.	NA	2/18/2014	2/28/2014	NA	NA	NA	Member TPH	444 Madison Avenue Suite 401 New York, NY 10022	848-833-4800	Introducing Broker
Latour Trading LLC	8/17/2009	10/1/2010	5/28/2010	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	5/28/2010	5/27/2010	1/9/2001	9/24/2010	Member TPH	1 Liberty Plaza 165 Broadway, 52nd Floor New York, NY 10006	212-609-2300	Clearing, Transact Business with the Public
Lime Brokerage LLC	8/18/2008	10/1/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	11 E 44th Street Suite 705 New York, NY 10017	212-824-6000	Transact Business with the Public
Liquidnet, Inc.	9/1/2009	9/15/2010	NA	NA	NA	NA	Member TPH	488 7th Avenue 15th Floor New York, NY 10018	848-874-2000	Agency
Lupo Securities, LLC	NA	NA	NA	NA	8/1/1997	NA	Member TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	Market Maker, Proprietary Trading
Macquarie Capital (USA) Inc.	12/1/2009	NA	5/28/2010	5/27/2010	NA	NA	Member TPH	125 W 55th Street Level 22 New York, NY 10019	212-291-1000	Agency
Marathon Trading Group LLC	2/13/2015	NA	NA	NA	1/30/2013	NA	Member TPH	100 Marketford Road Building 2, Suite 107 Wayne, PA 19087	610-254-4880	Market Maker, Proprietary Trading
Matrix Executions, LLC	8/18/2008	11/15/2010	NA	11/12/2015	2/1/2008	10/28/2010	Member TPH	801 S LaSalle Street Suite 300 Chicago, IL 60605	312-394-8000	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, 8th Floor NY11-100-08-01 New York, NY 10036	848-743-1295	Clearing, Brokerage, Transact Business with the Public

Company Name	SDX 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
Merrill Lynch, Pierce, Fenner & Smith Incorporated	9/18/2008	10/4/2010	5/14/2010	5/14/2010	4/25/1973	NA	Member TPH	One Bryant Park New York, NY 10036	800-837-7455	Clearing, Transact Business with the Public, Brokerage, Market Maker, Proprietary Trading
Mint Global Markets, Inc.	NA	NA	5/28/2010	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	212-208-9300	Agency
MKM Partners LLC	8/3/2009	NA	5/14/2010	5/14/2010	NA	NA	Member TPH	300 First Stamford Place 4th Floor East Wing Stamford, CT 06902	203-881-9080	Agency
Monadnock Capital Management, LP	NA	NA	NA	NA	12/1/2014	NA	Member TPH	1845 Walnut Street Suite 940 Philadelphia, PA 19103	267-239-0367	Market Maker
Morgan Stanley & Co. International plc	NA	NA	NA	NA	4/12/2017	NA	Sponsored Participant	20 Bank Street Canary Wharf London, UK E14 4A	#####98889	
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
Nesdaq Execution Services, LLC	9/19/2008	9/1/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	One Liberty Plaza 185 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	5/28/2010	5/27/2010	10/8/1987	4/18/2012	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 800 University Street, Suite 2800 Seattle, WA 98101	208-622-7200	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	5/28/2010	5/27/2010	9/1/2009	11/18/2010	Member TPH	Worldwide Plaza 309 W 48th Street New York, NY 10019	212-867-9000	Clearing, Transact Business with the Public, Proprietary Trading
Northern Trust Securities, Inc.	8/18/2008	10/5/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	50 S LaSalle Street Chicago, IL 60603	312-557-2000	Market Maker
Old Mission Capital, LLC	4/18/2012	4/18/2012	4/25/2012	4/25/2012	9/27/2017	NA	Member TPH	314 W Superior Suite 200 Chicago, IL 60654	312-280-3031	Market Maker
Old Mission Markets LLC	NA	NA	12/13/2019	NA	NA	NA	Member TPH	314 W Superior Suite 200 Chicago, IL 60654	312-280-3044	Public Customer Business
Olivetree Financial, LLC	NA	NA	9/1/2018	NA	NA	NA	Member TPH	420 Lexington Avenue Suite 800 New York, NY 10170	646-690-6800	Agency
Oppenheimer & Co. Inc.	NA	NA	NA	NA	5/17/1973	NA	Member TPH	85 Broad Street 22nd, 24th Floors New York, NY 10004	212-688-6000	Clearing, Transact Business with the Public
Optiver US, LLC	8/15/2009	NA	NA	5/30/2018	8/1/2006	9/24/2010	Member TPH	130 E Randolph Street 14th Floor Chicago, IL 60601	312-821-9500	Market Maker
Oscar Gruen & Son Incorporated	8/7/2017	NA	NA	NA	NA	NA	Member TPH	430 Park Avenue 8th Floor New York, NY 10022	212-419-4000	Agency
PEAK6 Capital Management LLC	8/1/2014	NA	NA	2/1/2016	12/2/1987	NA	Member TPH	141 W Jackson Boulevard Suite 500 Chicago, IL 60604	312-444-8000	Proprietary Trading
Parahing LLC	8/18/2008	9/15/2010	5/28/2010	5/27/2010	2/21/1973	9/28/2010	Member TPH	One Parahing Plaza Jersey City, NJ 07309	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.	8/1/2015	8/1/2015	5/28/2010	5/27/2010	NA	NA	Member TPH	1000 de la Gauchetiere West Suite 3100 Montreal, Quebec H3B 4W5	514-288-8181	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
Potamus Trading, LLC	4/15/2013	4/15/2013	4/11/2013	4/11/2013	NA	NA	Member TPH	2 Seaport Lane 8th Floor Boston, MA 02210	617-856-9722	Market Maker, Proprietary Trading
Princeton Alpha Management, LP	12/1/2015	12/1/2015	12/1/2015	12/1/2015	NA	NA	Sponsored Participant	61 Princeton Hightstown Road West Windsor, NJ 08550	609-289-9212	Agency
Puma Capital, LLC	NA	NA	8/15/2018	8/15/2018	NA	NA	Member TPH	287 Bowman Avenue 2nd Floor Purchase, NY 10577	212-289-4100	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 10189	718-618-4829	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 10189	718-618-4829	Proprietary Trading
Quantbot Technologies LP	3/27/2018	3/27/2018	3/27/2018	3/27/2018	NA	NA	Sponsored Participant	399 Lexington Avenue New York, NY 10017	212-622-6510	Proprietary Trading
Quantex Clearing, LLC	10/3/2011	12/27/2011	5/17/2011	5/17/2011	NA	NA	Member TPH	70 Hudson Street Hoboken, NJ 07030	201-708-7157	Clearing Services
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
Quantlab Securities LP	8/18/2008	11/1/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	3 Greenway Plaza Suite 200 Houston, TX 77046	713-333-3700	Transact Business with the Public, Brokerage
Quiet Light Securities, LLC	NA	NA	NA	NA	5/1/2001	NA	Member TPH	141 W Jackson Boulevard Suite 2020A Chicago, IL 60604	312-431-0573	Market Maker, Proprietary Trading
R.W. Pressprich & Co.	2/17/2009	11/15/2010	8/2/2010	8/2/2010	NA	NA	Member TPH	452 5th Avenue New York, NY 10018	212-832-8200	Agency
Rackaon Asset Management, LLC	10/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	2000 Broadway Suite 22C New York, NY 10023	212-724-2587	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	206-518-8858	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	212-868-7000	Clearing, Proprietary Trading, Transact Business with the Public
Robert W. Baird & Co. Incorporated	10/23/2008	1/3/2011	NA	NA	NA	NA	Member TPH	777 E Wisconsin Avenue Milwaukee, WI 53202	414-765-3500	Market Maker
Ronin Capital, LLC	NA	NA	NA	NA	12/17/2001	NA	Member TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5000	Market Maker

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Ronin Professional, 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
Rosenblatt Securities Inc.	8/18/2008	10/8/2010	6/28/2010	5/27/2010	NA	NA	Member TPH	40 Wall Street 58th Floor New York, NY 10005	212-807-3100	Agency
Roth Capital Partners, LLC	8/18/2008	NA	NA	NA	NA	NA	Member TPH	888 San Clemente Suite 400 Newport Beach, CA 92660	949-720-5700	Market Maker
SAC Capital Advisors, LP	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	72 Cummings Point Road Stamford, CT 06902	203-880-2275	Hedge Fund
Sabra Securities LLC	NA	NA	5/26/2010	5/27/2010	NA	NA	Member TPH	548 8th 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	415-293-3884	Public Customer Business
SAL Equity Trading, GP	9/3/2008	10/5/2010	5/28/2010	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	5/28/2010	5/27/2010	8/13/2013	NA	Member TPH	1345 Avenue of the Americas New York, NY 10105	212-689-1000	Clearing, Proprietary Trading, Transact Business with the Public
Seafarer 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
Scottie Capital (USA) Inc.	3/2/2009	9/15/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	250 Vesey Street New York, NY 10281	212-225-8500	Institutional Trading
See 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	646-762-8972	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	212-278-8000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
Simplex Trading, LLC	3/18/2015	NA	NA	4/13/2017	8/12/2010	3/1/2017	Member TPH	230 S LaSalle Street Suite 4-100 Chicago, IL 60604	312-380-2440	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	8/19/2017	NA	NA	Member TPH	11 Broadway Suite 514 New York, NY 10004	646-885-6486	Public Customer Business
SRT Securities LLC	NA	NA	NA	NA	10/27/1985	9/24/2010	Member TPH	888 6th 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	8/2/2010	8/2/2010	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	3/9/2008	NA	Member TPH	440 S LaSalle Street Suite 2101 Chicago, IL 60605	312-324-0328	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	201-868-2520	Proprietary Trading
Susquehanna Financial Group, LLLP	9/3/2008	10/5/2010	5/28/2010	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	610-617-2800	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	610-617-2800	Market Maker, Proprietary Trading
SVB Leerink LLC	8/18/2008	10/5/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	1 Federal Street 37th Floor Boston, MA 02110	617-918-4800	Agency
Synargy Capital Management, LLC	8/1/2016	NA	NA	NA	8/5/2007	NA	Member TPH	141 W Jackson Boulevard Suite 1530 Chicago, IL 60604	312-886-8889	Proprietary Trading
TD Ameritrade Clearing, Inc.	5/3/2011	5/3/2011	NA	5/27/2010	NA	NA	Member TPH	200 S 108th Avenue Omaha, NE 68154	800-889-3900	Public Customer Business, Clearing Services
Telsey Advisory Group, LLC	1/24/2011	8/15/2014	NA	NA	NA	NA	Member TPH	555 6th Avenue 7th Floor New York, NY 10017	212-973-9700	Public Customer Business
Tewksbury Investment Fund, Ltd.	7/1/2011	7/1/2011	1/8/2015	1/8/2015	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
Thermis Trading LLC	8/18/2008	10/1/2010	NA	NA	NA	NA	Member TPH	10 Town Square Suite 100 Chatham, NJ 07928	973-865-8800	Agency
ThinkTrade, LLC	2/1/2010	10/20/2010	1/9/2015	1/9/2015	NA	NA	Sponsored Participant	2210 Encinitas Boulevard Suite I Encinitas, CA 92024	760-452-2451	Proprietary Trading
Timber Hill LLC	NA	NA	NA	NA	12/27/1988	12/15/2010	Member TPH	One Pickwick Place Suite 200 Greenwich, CT 06830	203-618-5800	Clearing, Market Maker
TJM Investments, LLC	NA	NA	NA	NA	3/11/2013	NA	Member TPH	318 W Adams Street 9th Floor Chicago, IL 60606	312-432-5100	Floor Broker, Transact Business with the Public
Tradebot Systems, Inc.	8/18/2008	9/1/2010	5/28/2010	5/27/2010	NA	NA	Member TPH	1251 NW Brainerd Parkway Suite 700 Kansas City, MO 64116	816-285-6400	Proprietary Trading
TradeStation Securities, Inc.	8/18/2008	9/1/2010	5/26/2010	5/25/2010	NA	NA	Member TPH	8050 SW 10th Street Suite 2000 Plantation, FL 33324	954-852-7900	Market Maker
TRC Hialeah, Ltd.	12/11/2009	NA	NA	NA	NA	NA	Sponsored Participant	377 Broadway 11th Floor New York, NY 10013	646-472-1792	Proprietary Trading
TRC Markets LLC	4/13/2017	4/13/2017	4/13/2017	4/13/2017	NA	NA	Member TPH	710 Johnnie Dodds Boulevard Suite 300 Mt. Pleasant, SC 29464	917-388-8644	Agency
Trinity Executions, LLC	NA	NA	NA	NA	11/1/2011	NA	Member TPH	141 W Jackson Boulevard Suite 3600 Chicago, IL 60604	312-678-4704	Floor Broker, Transact Business with the Public
Tudor, Pickering, Holt & Co. Securities, Inc.	8/18/2008	10/17/2011	NA	NA	NA	NA	Member TPH	1111 Bagby Suite 4600 Houston, TX 77002	713-333-7100	Agency
Two Sigma Investments, LLC	9/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	100 Avenue of the Americas 4th Floor New York, NY 10013	212-775-6878	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	212-775-6878	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	646-292-6843	Proprietary Trading

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Two Sigma Securities, LLC	10/1/2008	10/5/2010	5/27/2010	5/27/2010	9/15/2017	7/18/2018	Member TPH	100 Avenue of the Americas 18th Floor New York, NY 10013	212-625-5700	Market Maker, Broker
U.S. Securities, Int'l. Corp.	NA	NA	NA	NA	7/3/1973	NA	Member TPH	120 Broadway Suite 1017 New York, NY 10271	212-227-0800	Transact Business with the Public
UBS Financial Services Inc.	NA	NA	NA	NA	12/11/1972	NA	Member TPH	1200 Harbor Boulevard Weehawken, NJ 07088	201-352-3000	Clearing, Transact Business with the Public
UBS Securities LLC	10/15/2008	10/1/2010	4/12/2010	4/12/2010	10/1/1988	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	8/17/2019	8/17/2019	8/17/2019	8/17/2019	NA	NA	Sponsored Participant	151 Bodman Place Suite 301 Red Bank, NJ 07701	732-450-7452	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	732-450-7452	Proprietary Trading
Ustocktrade Securities, Inc.	4/17/2015	NA	NA	NA	NA	NA	Member TPH	278 Grove Street Suite 2-400 Newton, MA 02458	617-340-3041	Public Customer Business, Proprietary Trading
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	949-352-4894	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	8/10/2010	8/10/2010	NA	NA	Member TPH	7280 W Palmisto Park Road Suite 310 Boca Raton, FL 33433	561-620-0308	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	848-682-8000	Clearing, Proprietary Trading, Transact Business with the Public, Brokerage
Virtu Financial BD LLC	11/17/2008	10/7/2010	5/27/2010	5/27/2010	NA	NA	Member TPH	307 Camp Craft Road Austin, TX 78743	800-544-7508	Proprietary Trading
Virtu Financial Capital Markets LLC	8/18/2008	9/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	300 Vesey Street New York, NY 10282	212-418-0100	Proprietary Trading
Virtu ITG LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	NA	NA	Member TPH	One Liberty Plaza 185 Broadway, 4th Floor New York, NY 10006	212-588-4000	Agency
Veion Financial Markets LLC	4/1/2009	11/15/2010	7/13/2012	7/13/2012	12/11/2008	NA	Member TPH	120 Long Ridge Road 3 North Stamford, CT 06902	203-388-2700	Clearing, Transact Business with the Public
Volant Execution, LLC	8/15/2011	NA	NA	10/1/2015	4/12/2005	9/24/2010	Member TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	Clearing, Brokerage
Volant Liquidity, LLC	4/15/2011	NA	5/27/2010	5/27/2010	2/1/2010	3/23/2011	Member TPH	260 Vesey Street Suite 2801 New York, NY 10281	848-804-7900	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	8/1/2008	NA	Member TPH	2800 Niagara Lens North Plymouth, MN 55447	952-345-0611	Market Maker
Wadsworth 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 800 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	8/9/2010	8/9/2010	4/1/2014	4/1/2014	Member TPH	550 S Tryon Street, 8th Floor D1088-080 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	3/1/2008	9/24/2010	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Clearing, Floor Broker, Transact Business with the Public, Brokerage
Wolverine Securities, LLC	NA	NA	NA	5/31/2017	NA	NA	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Market Maker
Wolverine Trading, LLC	10/3/2011	NA	NA	10/1/2015	7/12/1994	9/24/2010	Member TPH	175 W Jackson Boulevard Suite 200 Chicago, IL 60604	312-884-4000	Market Maker, Proprietary Trading
X-Change Financial Access, LLC	NA	NA	NA	NA	5/1/2003	NA	Member TPH	440 S LaSalle Street Suite 2900 Chicago, IL 60605	312-235-0320	Clearing, Floor Broker, Transact Business with the Public
XR Securities LLC	1/15/2009	11/15/2010	5/10/2012	5/10/2012	11/30/2007	NA	Member TPH	550 W Jackson Boulevard Suite 1000 Chicago, IL 60661	312-244-4712	Market Maker, Proprietary Trading