	Form 1 Page 1	U.S. SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549	Date filed	OFFICIAL
	cution Page	APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANCE A CT	(MM/DD/YY) 10/30/17	USE ONLY
		e to keep this form current and to file accurate supplementary information on a timely oks and records or otherwise to comply with the provisions of law applying to the cond deral securities laws and may result in disciplinary, administrative or criminal action.	basis, or the failure uct of the applicant	
		INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS		
		LICATION AMENDMENT		
1.	State the	name of the applicant. Cboe Exchange, Inc,		
2.	8050 Ma	he applicant's primary street address (Do not use a P.O. Box): rshall Dr., Suite 120 Kansas 66214		
3.	Provide t	he applicant's mailing address (if different):	170	02662
4.	Provide t	he business telephone and facsimile number:		
	<u>(913) 815</u>	-7000 (913) 815-7119 (Telephone) (Facsimile)		
5.	Provide th <u>Anders Fr</u> (Nam	ne name, title and telephone number of a contact employee: anzon SVP, Associate General Counsel, Chicago Board Ontions Exchange Inc.	(913) 815-7154 ber)	- 3
6.	Provide th Joanne Me 400 S. Las		11100131 PH 2:5	
	Chicago, I			2 3
7.	Provide th	e date that applicant's fiscal year ends: December 31		
8.	Indicate legal status of the applicant: X Corporation Sole Partnership Partnership Limited Liability Company Other (specify):			12.5
	(a) Date (N (c) Statute	an a sole proprietor, indicate the date and place where applicant obtained its legal status ed, place where partnership agreement was filed or where applicant entity was formed MM/DD/YY): <u>11/01/07</u> (b) State/Country of formation: <u>Delaware/United States of A</u> under which applicant was organized: <u>General Corporation Law of the State of Delay</u>); marica	2
telegram undersig of, said a exhibits,	licant consent ge Commission to the applica med, being fir applicant. The schedules, or	is that service of any civil action brought by, or notice of any proceeding before, the n in connection with the applicant's activities may be given by registered or certified m ant's contact employee at the main address, or mailing address if different, given in Ite st duly sworn, deposes and says that he/she has executed this form on behalf of, and w e undersigned and applicant represent that the information and statement contained I other documents attached hereto, and other information filed herewith, all of which e and complete.	mail or confirmed ms 2 and 3. The fifth the authority	
Date: By:(Subscribe	10/30/17 (MM/DD/) (Signature) ed and sworn	COOC Exchange, mc.	Counsel	
Ay Com	mission expire	s 08 04 19 County of Johnson State of Kans	as	
	This page	must always be completed in full with original, manual signature and notarization Affix notary stamp or seal where applicable.	on.	
		notary stamp of sear where applicable.		

A N	OTARY PUBLIC State of Kansas	
-A-	BIANCA STODDEN	
	My Appt. Exp. 08/04/19	

Cboe

October 30, 2017

Via Federal Express

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

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SEC Mail Processing Section

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Washington DC 411

Cboe Exchange, Inc. Form 1 Amendment

Dear Jeanette:

Re:

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 exhibit:

- Exhibit A (updated to reflect the Exchange's Certificate of Incorporation and Bylaw information in accordance with SEC Rule 6a-2(d)(3));
- Exhibit B (updated to reflect location of the Exchange's current rulebook and information circulars in accordance with SEC Rule 6a-2(d)(3));
- Exhibit C (updated to reflect list of Directors and Committee Members);
- Exhibit F (updated to include the most recent, final versions of agreements circulated to Members and other Users of the Exchange)
- Exhibit K (updated to reflect Exchange ownership details);
- 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 A, B, C, F, K, and M currently on file with the Commission. Please do not hesitate to contact me if you have any questions or require anything further.

Sincerely,

Anders Franzon SVP, Associate General Counsel

Enclosures

Exhibit A

Exhibit Request:

A copy of the constitution, articles of incorporation or association with all subsequent amendments, and of existing by-laws or corresponding rules or instruments, whatever the name, of the applicant.

Response:

Cboe Exchange, Inc. (the "Exchange") is registered as a national securities exchange pursuant to Section 6(a) of the Securities Exchange Act of 1934. The following materials required by this Exhibit A are available on the "Cboe Corporate Documents and Rules" page of the Exchange's public website (<u>http://www.cboe.com/aboutcboe/legal-regulatory</u>):

1. Certificate of Incorporation of Cboe Exchange, Inc.

2. Amended and Restated By-Laws of Cboe Exchange, Inc.

These documents are updated and accurate as of the dates of each document.

Exhibit B

Exhibit Request:

A copy of all written rulings, settled practices having the effect of rules, and interpretations of the Governing Board or other committee of the applicant in respect of any provisions of the constitution, by-laws, rules, or trading practices of the applicant which are not included in Exhibit A.

Response:

1. The Rules of Cboe Exchange, Inc. are available at <u>http://www.cboe.com/aboutcboe/legal-regulatory</u>. Rule filings and circulars are also available at this location. These documents are updated frequently and are accurate as of the respective dates on each document.

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:

C-1

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
- Chris Concannon

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President, COO)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

B. <u>Direct Edge LLC</u>

- 1. *Name*: Direct Edge LLC (f/k/a Direct Edge, Inc.) *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

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Chief Financial Officer)
- Chris Isaacson (Chief Information Officer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

C. <u>Cboe BZX Exchange, Inc.</u>

- 1. *Name*: Cboe BZX Exchange, 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 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: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached for Seventh Amended and Restated By-laws.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)

- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)
- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Alicia Goldberg (Vice President Statistical Analysis)
- David Gray (Vice President Business Development GCS)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Andrew Lowenthal (Senior Vice President Business Development)
- Joanne Moffic-Silver (Executive Vice President, General Counsel &
- Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

D. <u>Cboe BYX Exchange, Inc.</u>

- 1. *Name*: Cboe BYX Exchange, 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 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
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)
- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)
- Bryan Christian (Senior Vice President, Head of U.S. Sales)

- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

• Jill Sommers

C-8

- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

E. <u>Cboe EDGA Exchange, Inc.</u>

- 1. *Name*: Cboe EDGA Exchange, 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*: 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: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached for Eighth Amended and Restated By-laws.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)

- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)
- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner

• Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year. Not applicable.

F. <u>Cboe EDGX Exchange, Inc.</u>

- 1. *Name*: Cboe EDGX Exchange, 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*: 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: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached for Eighth Amended and Restated By-laws.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)

- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)
- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Alicia Goldberg (Vice President Statistical Analysis)
- David Gray (Vice President Business Development GCS)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Andrew Lowenthal (Senior Vice President Business Development)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner
- **10.** Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

G. <u>Cboe Trading, Inc.</u>

- 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 whollyowned 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*: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Chris Isaacson
- Chris Concannon
- Brian N. Schell

- Troy Yeazel (President)
- Anders Franzon (Secretary)
- Bryan Upp (Chief Compliance Officer)
- Derick Shupe (FINOP, Treasurer)
- **10.** Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

H. <u>Omicron Acquisition Corp.</u>

- 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 Bats 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
- Chris Concannon
- Mark Hemsley

- Mark Hemsley (President and Treasurer)
- Joanne Moffic-Silver (Vice President and Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

I. <u>Cboe FX Holdings, LLC</u>

- 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. Name was amended from Hotspot FX Holdings, LLC, a Delaware LLC, on March 11, 2015.
- 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, Bats Hotspot SEF LLC, and Bats Hotspot IB LLC.
- 6. *Copy of constitution*: Not applicable.
- 7. *Copy of articles of incorporation or association and amendments*: See attached amendment indicating the entity name change.
- 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

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

J. 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. Name was amended from KCG Hotspot FX LLC, a Delaware LLC, on March 12, 2015.
- 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*: See attached amendment indicating the entity name change.
- 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

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- Barry Calder (Head of Liquidity & Client Services)
- Paul Reidy (Chief Operating Officer)
- Lisa Shemie (Associate General Counsel)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

K. <u>Cboe FX Services, LLC</u>

- 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. Name was amended from KCG Hotspot FX LLC, a Delaware LLC, on March 12, 2015.
- 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*: See attached amendment indicating the entity name change.
- 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

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- Barry Calder (Head of Liquidity & Client Securities)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

L. Bats International Holdings Limited

- Name: Bats International Holdings Limited Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
- 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*: Bats International Holdings Limited is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
- 5. *Brief description of business or functions*: Bats International Holdings Limited is a holding company of Cboe FX Europe Limited, Bats Hotspot Asia Pte. Ltd., 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
- Chris Concannon
- Mark Hemsley

- Antonio Amelia (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

M. <u>Cboe FX Europe Limited</u>

- Name: Cboe FX Europe Limited Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
- 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 Bats International Holdings Limited which is wholly-owned by Bats 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*: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: Not applicable.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

- Antonio Amelia (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

N. <u>Bats Hotspot Asia Pte. Ltd.</u>

- 1. *Name*: Bats Hotspot Asia Pte. Ltd. *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*: Bats Hotspot Asia Pte. Ltd. is wholly-owned by Bats International Holdings Limited which is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
- 5. *Brief description of business or functions*: Bats Hotspot Asia Pte. Ltd. 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

- Chris Concannon
- Ng Lip Chih

- Chris Concannon (President)
- Chew Pei Tsing (Secretary)
- Lai Jek Ping (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

O. <u>Bats Trading Limited</u>

- Name: Bats Trading Limited Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
- 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*: Bats Trading Limited is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
- 5. *Brief description of business or functions*: Bats Trading 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

- Mark Hemsley
- Adam Eades
- John Woodman
- Richard Balarkas
- Rebecca Fuller
- Julian Corner
- Kristian West
- Ted Hood

- Mark Hemsley (CEO)
- Antonio Amelia (Secretary)
- Jill Griebenow (CFO)
- Adam Eades (Chief Legal and Regulatory Officer)
- Jerry Avenell (Co-Head Sales)
- Alex Dalley (Co-Head Sales)

- Guy Simpkin (Head of Business Development)
- David Howson (COO)

Standing Committees

Audit, Risk and Compliance Committee

- Ted Hood
- Rebecca Fuller
- Richard Balarkas

Remuneration Committee

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

P. <u>Chi-X Europe Limited</u>

- 1. *Name*: Chi-X Europe Limited *Address*: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
- 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. It changed its name to Chi-X Europe Limited on July 2, 2007.
- 4. *Brief description of nature and extent of affiliation*: Chi-X Europe Limited is wholly-owned by Bats Trading Limited which, in turn, is indirectly wholly owned by Bats Global Markets, Inc.
- 5. Brief description of business or functions: 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, Chi-X Europe Limited operates the smart order router that is needed for the routing strategies deployed by Bats Trading 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*: 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
- John Woodman

- John Woodman (Chairman)
- Mark Hemsley (CEO)
- Antonio Amelia (Secretary)
- Jill Griebenow (CFO)
 - Adam Eades (Chief Legal and Regulatory Officer)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

Q. <u>Cboe ETF.com, Inc.</u>

- 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*: See attached amendment indicating the entity name change.
- 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
- Chris Concannon

- Dave Nadig (Chief Executive Officer)
- Chris Concannon (President and Chief Operating Officer)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Chief Financial Officer and Treasurer)
- Chris Isaacson (Executive Vice President and Global Chief Information Officer)
- Joanne Moffic-Silver (Executive Vice President, General Counsel and Secretary)
- 10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

R. <u>INDEXPUBS S.A.</u>

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 Bats International Holdings Limited which is whollyowned by Bats 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

- Dave Nadig (President)
- Verónica Rocío Bravo (General Manager)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

S. <u>Bats Hotspot IB LLC</u>

- Name: Bats Hotspot IB 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 Illinois under Section 15-1 of the Limited Liability Company Act of the State of Illinois on May 23, 2003.
- 4. *Brief description of nature and extent of affiliation*: Bats Hotspot IB LLC is wholly-owned by Bats Hotspot 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*: Bats Hotspot IB LLC is an introducing broker registered with the National Futures Association.
- 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

- Bryan Harkins (Senior Vice President)
- Derick Shupe (Chief Accounting Officer)

<u>Managers</u>

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

T. <u>Bats Hotspot SEF LLC</u>

- Name: Bats Hotspot 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*: Bats Hotspot SEF LLC is wholly-owned by Bats Hotspot 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*: Bats Hotspot 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

- Bryan Harkins (Chief Executive Officer)
- Lisa Shemie (Chief Compliance 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.

U. Bats Worldwide Holdings Limited

- Name: Bats Worldwide Holdings Limited Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
- 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: Bats Worldwide Holdings Limited is wholly-owned by Omicron Acquisition Corp., which is an affiliate of the Exchange.
- 5. *Brief description of business or functions*: Bats Worldwide Holdings Limited is an intermediate holding company of Bats Trading Limited and Bats International 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*: Not applicable.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

- Antonio Amelia (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

V. <u>Cboe Global Markets, Inc.</u>

- 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 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:* See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached for Fourth Amended and Restated By-laws.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- James Boris
- Frank English
- William Farrow
- Edward Fitzpatrick
- Janet Froetscher
- Jill Goodman
- Chris Mitchell
- Roderick Palmore
- Joe Ratterman
- Michael Richter
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Current Officers

• Chris Concannon (President and COO)

- Alan Dean (EVP, CFO and Treasurer)
- Mark Hemsley (EVP, President Europe)
- Chris Isaacson (EVP, CIO)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- David Reynolds (VP, & Chief Accounting Ofc)
- Edward Tilly (Chief Executive Officer)

Compensation Committee

- Frank English
- Janet Froetscher
- Samuel Skinner
- Eugene Sunshine

Audit Committee

- William Farrow
- Edward Fitzpatrick
- Carole Stone

Nominating and Governance Committee

- Jill Goodman
- Roderick Palmore
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Finance and Strategy Committee

- Frank English
- Edward Fitzpatrick
- Jill Goodman
- Carole Stone
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

W. Cboe C2 Exchange, Inc.

- 1. *Name*: Cboe C2 Exchange, Inc. *Address*: 400 South LaSalle Street, Chicago, Illinois 60605
- 2. Form of organization: Corporation.
- 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:* C2 is a registered national securities exchange.
- 6. *Copy of constitution*: Not applicable.
- 7. *Copy of articles of incorporation or association and amendments*: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: See attached for Ninth Amended and Restated By-laws.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:

Current Directors

- Ed Tilly
- James Boris
- Frank English
- William Farrow
- Ed Fitzpatrick
- Janet Froetscher
- Jill Goodman
- Chris Mitchell
- Roderick Palmore
- Joe Ratterman
- Michael Richter
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

- Alexandra Albright (Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Rodney Burt (VP, Infrastructure)
- Kevin Carrai (VP, Connectivity, Data & Member Services)
- Karen Christiansen (VP, Regulatory Systems Dev)
- Paul Ciciora (VP, Systems Infrastructure)
- Catherine Clay (VP, Business Development)
- Chris Concannon (President and COO)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (EVP, CFO and Treasurer)
- John Deters (CSO & Head Corp Initiative)
- James Enstrom (VP & Chief Audit Exec.)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (VP, Business Analysis)
- Carmen Frazier Brannan (VP, Government Relations)
- Anders Franzon (SVP, Associate General Counsel)
- Todd Furney (VP, Chief Risk Officer)
- Alicia Goldberg (VP, Statistical Analysis)
- David Gray (VP, Business Develop GCS)
- Mark Hemsley (EVP, President Europe)
- Gregory Hoogasian (SVP, CRO of CBOE, C2 CFE)
- Chris Isaacson (EVP, CIO)
- Carol Kennedy (VP, & Chief Comm, Officer)
- Stephanie Klein (VP Chief Marketing Officer)
- Deborah Koopman (VP, Investor Relations)
- Jennifer Lamie (Chief Regulatory Advisor)
- Stephanie Lara Marrin (Deputy Chief Reg officer)
- Andrew Lowenthal (SVP, Business Development)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- Anthony Montesano (VP, Trading Operations)
- Matthew Moran (VP, Institutional Marketing)
- Mark Novak (VP, CTO Development)
- LuAnn O'Shea (VP Facilities)
- Donald Patton (VP, Acct/Controller)
- Debra Peters (VP, Options Institute)
- Roberta Piwnicki (VP, Systems Development)
- Kapil Rathi (SVP, Options Business Development)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (VP, & Chief Accounting Ofc)
- James Roche (VP, Market Data Services)
- Bradley Samuels (VP, Systems Development)

- Brian Schell (SVP, Finance)
- Curt Schumacher (VP, CTO Operations)
- Derick Shupe (VP, Controller)
- John Sexton (Deputy General Counsel)
- Steven Sinclair (VP, Systems Development)
- Philip Slocum (EVP, Chief Risk Officer)
- Eileen Smith (VP, Systems Planning)
- William Speth (VP, Research & Prod. Dev.)
- Gregory Steinberg (VP, Associate General Counsel and Assistant Secretary)
- Paul Stephens (VP, Inst'l Mrktg & Sales)
- Edward Tilly (Chief Executive Officer)
- Michael Todd (VP, Systems Operations)
- Michael Todorofsky (VP, Market Operations)
- Michael Trees (VP, Trading Sys Develop.)
- Aaron Weissenfluh (VP, CISO)
- Laura Zinanni (VP, Office of CEO)

Standing Committees

Executive Committee

- Edward Tilly
- James Boris
- Edward Fitzpatrick
- Roderick Palmore
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Compensation Committee

- Samuel Skinner
- Frank English
- Janet Froetscher
- Eugene Sunshine

Nominating and Governance Committee

- Eugene Sunshine
- Jill Goodman
- Roderick Palmore
- Samuel Skinner
- Carole Stone

Regulatory Oversight and Compliance Committee

- Roderick Palmore
- William Farrow

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

X. <u>CBOE Futures Exchange, LLC</u>

- 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 Future Exchanges, LLC is a contract market 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
- Marc Schultz

- Alexandra Albright (Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Joseph Caauwe (Managing Director CFE)
- Chris Concannon (President)
- Alan Dean (EVP, CFO and Treasurer)
- Gregory Hoogasian (SVP, CRO of CBOE C2, CFE)
- Chris Isaacson (EVP, CIO)
- Jennifer Lamie (Chief Regulatory Advisor)
- Stephanie Lara Marrin (Deputy Chief Reg Officer0

- Andrew Lowenthal (SVP, Business Development)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- Michael Mollet (Managing Director CFE)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (VP & Chief Accounting Ofc)

Standing Committees

Executive

- Ed Tilly
- Michael Gorham

Regulatory Oversight Committee

- Michael Gorham
- Gilbert Bassett
- James Parisi
- Marc Schultz

Trading Advisory Committee

- Jay Caauwe
- Kirk Bonniewell
- Zeke Charlesworth
- Michael Dennis
- Johan Drylewicz
- Alex Gerko
- Josh Grant
- Douglas Schadewald
- Andrew Smith

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

Y. <u>CBOE Stock Exchange, LLC</u>

- 1. *Name*: CBOE Stock Exchange, LLC ("CBSX") *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*: CBSX is a 49.96%-owned subsidiary of Cboe Exchange, Inc.
- 5. Brief description of business or functions: CBSX operated the CBOE Stock Exchange, which acted as a trading market for securities other than options as a facility of CBOE. CBSX was approved by the SEC in March 2007. CBSX ceased trading operations on April 30, 2014.
- 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

- Alan Dean
- James Fitzgibbons
- Jaap Gelderloos
- Andrew Lowenthal
- Tom O'Mara
- Rick Oscher
- John Deters
- Dave Reynolds
- Eric Frait
- Steve Sosnick

- Angelo Evangelou (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

Z. <u>Cboe Building Corporation</u>

- 1. *Name*: Cboe Building Corporation *Address*: 400 South LaSalle Street, Chicago, Illinois 60605
- 2. *Form of organization*: Corporation.
- 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.
- 6. *Copy of constitution*: Not applicable.
- 7. *Copy of articles of incorporation or association and amendments*: See attached amendment indicating the entity name change.
- 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

- Alan Dean
- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- Alan Dean (Treasurer)
- LuAnn O'Shea (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

AA. <u>CBOE, LLC</u>

- 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

- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- Andrew Lowenthal (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

BB. <u>CBOE III, LLC</u>

- 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

- John Deters
- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

CC. 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*: See attached amendment indicating the entity name change.
- 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

- Alan Dean
- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- John Deters (Vice President)
- Chris Isaacson (Vice President)
- Brian Schell (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

DD. <u>CBOE Livevol, LLC</u>

- 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

- John Deters (President)
- Andrew Lowenthal (Vice President)
- Catherine Clay (Vice President)
- Chris Isaacson (Vice President)
- Dave Reynolds (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

EE. <u>Cboe UK Limited</u>

- Name: Cboe UK Limited Address: Level 30, The Leadenhall Building, 122 Leadenhall Street, London, United Kingdom EC3V 4AB
- 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*: See attached amendment indicating the entity name change.
- 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

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

FF. <u>CBOE Vest, LLC</u>

- 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 Vest Financial Group, 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

- John Deters
- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

GG. 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

- John Deters
- Chris Concannon
- Ed Tilly

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

HH. <u>Cboe Data Services, LLC</u>

- 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*: See attached amendment indicating the entity name change.
- 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

- Eric Frait
- Bryan Harkins
- Chris Isaacson
- Jim Roche
- Curt Schumacher

- Chris Isaacson (President)
- Bryan Harkins (Senior Vice President)
- Kevin Carrai (Vice President)
- Jim Roche (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

II. Signal Trading Systems, LLC

- 1. *Name*: Signal Trading Systems, LLC ("STS") *Address*: 400 South LaSalle Street, Chicago, Illinois 60605
- 2. Form of organization: Limited Liability Company.
- 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:* STS developed and markets a multiasset 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.

JJ. The Options Exchange, Incorporated

- 1. *Name*: The Options Exchange, Incorporated *Address*: 400 South LaSalle Street, Chicago, IL 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), January 7, 1974.
- 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 Options Exchange, Incorporated has been inactive since its incorporation.
- 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

- Alan Dean
- Chris Concannon
- Ed Tilly

- Ed Tilly (Chairman)
- Chris Concannon (President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

KK. Vest Financial Group, Inc.

- 1. *Name*: Vest Financial 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
- William Speth

- 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.

LL. Cboe Hong Kong Limited

- 1. *Name*: Cboe Hong Kong Limited *Address*: 6th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong
- 2. *Form of organization*: Private Company Limited by Shares.
- 3. *Name of state, statute under which organized and date of incorporation*: Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), May 29, 2017.
- 4. Brief description of nature and extent of affiliation: Cboe Hong Kong Limited is wholly-owned by Bats 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*: See attached amendment indicating the entity name change.
- 8. *Copy of existing by-laws*: Not applicable.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions:
 - Current Directors
 - Dave Gray

Current Officers

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

MM. Bats Hotspot SEF LLC

- 1. Name: Bats Hotspot SEF 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 1, 2015.
- 4. *Brief description of nature and extent of affiliation*: As of August 18, 2016, Bats Hotspot SEF LLC ceased to exist.
- 5. *Brief description of business or functions*: Not applicable.
- 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 August 18, 2016, Bats Hotspot SEF LLC ceased to exist.

NN. Bats Global Markets, Inc.

- 1. *Name*: Bats Global Markets, 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 August 22, 2013.
- 4. *Brief description of nature and extent of affiliation*: On February 28, 2017, Bats Global Markets, Inc. was merged with and into Cboe Bats, LLC, with Cboe Bats, LLC as the surviving corporation.
- 5. *Brief description of business or functions:* Not applicable.
- 6. *Copy of constitution*: Not applicable.
- 7. *Copy of articles of incorporation or association and amendments*: Not applicable.
- 8. *Copy of existing by-laws*: Not applicable.
- 9. Name and title of present officers, governors, members of standing committees and persons performing similar functions: None.
- 10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: As of February 28, 2017, Bats Global Markets, Inc. ceased to exist.

OO. DerivaTech Corporation

- 1. Name: DerivaTech Corporation Address:
- 2. *Form of organization*: Corporation.
- 3. *Name of state, statute under which organized and date of incorporation:*
- 4. Brief description of nature and extent of affiliation: DerivaTech Corporation, a previously wholly-owned subsidiary of CBOE Holdings, was dissolved on December 22, 2016.
- 5. *Brief description of business or functions:* Not applicable.
- 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: DerivaTech Corporation, a previously wholly-owned subsidiary of CBOE Holdings, was dissolved on December 22, 2016.

Form 1, Exhibit C Index of Attachments

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

- AA CBOE, LLC
- BB CBOE III, LLC
- CC Cboe Bats, LLC (Updated)
- DD CBOE Livevol, LLC
- EE Cboe UK Ltd. (Updated)
- FF CBOE Vest, LLC
- GG Loan Markets, LLC
- HH Cboe Data Services, LLC (Updated)
- II Signal Trading Systems, LLC
- JJ The Options Exchange, Incorporated
- KK Vest Financial Group, Inc.
- LL Cboe Hong Kong Limited (Updated)

Bats Global Markets Holdings, Inc.

Α

B Direct Edge LLC

C Cboe BZX Exchange, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS BZX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS BZX EXCHANGE, INC." TO "CBOE BZX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:13 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4450647 8100 SR# 20176643028

You may verify this certificate online at corp.delaware.gov/authver.shtml

Jeffrey W. Bullock, Se

Authentication: 203408847 Date: 10-17-17

State of Delaware Secretary of State Division of Corporations Delivered 10:13 PM 10/16/2017 FILED 10:13 PM 10/16/2017 SR 20176643028 - File Number 4450647

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION of

BATS BZX EXCHANGE, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on November 1, 2007 under the name BATS Exchange, Inc. This Second Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe BZX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Bats Global Markets Holdings, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Bats Global Markets Holdings, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise

provided in Section (c) of this Article Sixth, the Corporation 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 Directors of the Corporation.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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 Directors.

(f) The rights conferred on any Covered Person by this Article Sixth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation'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 corporation, 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 corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(b) Any repeal or modification of the foregoing provisions of this Article Sixth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS BZX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS BZX-EXCHANGE, INC. de la By: Name: Edward T. Tilly

Its: Chief Executive Officer

SEVENTH AMENDED AND RESTATED

BYLAWS OF

CBOE BZX EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

(a) The term "Act" means the Securities Exchange Act of 1934, as amended.

(b) The term "affiliate" of a Person or "affiliated with" another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.

(c) The term "Board" means the Board of Directors of the Corporation.

(d) The term "Corporation" means Cboe BZX Exchange, Inc.

(e) The term "Exchange" means the Corporation, its exchange market and any facilities thereof.

(f) The term "Exchange Member" shall have the same meaning as the term "Member" in the Rules of the Exchange.

(g) The term "Person" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.

(h) The term "Rules" means the rules of the Exchange as adopted or amended from time to time.

(i) The term "associated with an entity" means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.

(j) The term "Representative Director Nominating Body" shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, than the "Representative Director Nominating Body" shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or,

if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided, however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall

constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or

omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other 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.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may

determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any

office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

D Cboe BYX Exchange, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS BYX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS BYX EXCHANGE, INC." TO "CBOE BYX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:55 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4715533 8100 SR# 20176643022

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203409177 Date: 10-17-17

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION of

BATS BYX EXCHANGE, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on July 30, 2009 under the name BATS Y-Exchange, Inc. This Second Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe BYX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Bats Global Markets Holdings, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Bats Global Markets Holdings, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

State of Delaware Secretary of State Division of Corporations Delivered 09:55 PM 10/16/2017 FILED 09:55 PM 10/16/2017 SR 20176643022 - File Number 4715533 (b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise

provided in Section (c) of this Article Sixth, the Corporation 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 Directors of the Corporation.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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 Directors.

(f) The rights conferred on any Covered Person by this Article Sixth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation'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 corporation, 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 corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes.

Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS BYX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS BYX EXCHANGE, INC By:

Name: Edward T. Tilly Its: Chief Executive Officer

SEVENTH AMENDED AND RESTATED BYLAWS OF CBOE BYX EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

(a) The term "Act" means the Securities Exchange Act of 1934, as amended.

(b) The term "affiliate" of a Person or "affiliated with" another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.

(c) The term "Board" means the Board of Directors of the Corporation.

(d) The term "Corporation" means Cboe BYX Exchange, Inc.

(e) The term "Exchange" means the Corporation, its exchange market and any facilities thereof.

(f) The term "Exchange Member" shall have the same meaning as the term "Member" in the Rules of the Exchange.

(g) The term "Person" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.

(h) The term "Rules" means the rules of the Exchange as adopted or amended from time to time.

(i) The term "associated with an entity" means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.

(j) The term "Representative Director Nominating Body" shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, than the "Representative Director Nominating Body" shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or,

if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided, however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall

constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has regualified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or

omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other 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.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may

determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any

office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

E Cboe EDGA Exchange, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS EDGA EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS EDGA EXCHANGE, INC." TO "CBOE EDGA EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:48 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4662897 8100 SR# 20176643030

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203410993 Date: 10-17-17 State of Delaware Secretary of State Division of Corporations Delivered 09:48 PM 10/16/2017 FILED 09:48 PM 10/16/2017 SR 20176643030 - File Number 4662897

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION of BATS EDGA EXCHANGE, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on March 9, 2009 under the name EDGA Exchange, Inc. This Third Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Second Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Second Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe EDGA Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Direct Edge LLC will be the sole owner of the Common Stock. Any sale, transfer or assignment by Direct Edge LLC of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person

expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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 Directors.

(f) The rights conferred on any Covered Person by this Article Sixth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation'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 corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS EDGA Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS EDGA, EXCHANGE, INC By: Name: Edward T. Tilly Its: Chief Executive Officer

EIGHTH AMENDED AND RESTATED BYLAWS OF

CBOE EDGA EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

(a) The term "Act" means the Securities Exchange Act of 1934, as amended.

(b) The term "affiliate" of a Person or "affiliated with" another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.

(c) The term "Board" means the Board of Directors of the Corporation.

(d) The term "Corporation" means Cboe EDGA Exchange, Inc.

(e) The term "Exchange" means the Corporation, its exchange market and any facilities thereof.

(f) The term "Exchange Member" shall have the same meaning as the term "Member" in the Rules of the Exchange.

(g) The term "Person" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.

(h) The term "Rules" means the rules of the Exchange as adopted or amended from time to time.

(i) The term "associated with an entity" means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.

(j) The term "Representative Director Nominating Body" shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, than the "Representative Director Nominating Body" shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one

upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided,

however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other 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.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall

not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

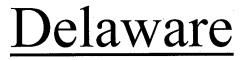
Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

F Cboe EDGX Exchange, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS EDGX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS EDGX EXCHANGE, INC." TO "CBOE EDGX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:03 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4662896 8100 SR# 20176643024

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203409170 Date: 10-17-17

Page 1

State of Delaware Secretary of State Division of Corporations Delivered 10:03 PM 10/16/2017 FILED 10:03 PM 10/16/2017 SR 20176643024 - File Number 4662896

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION of

BATS EDGX EXCHANGE, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on March 9, 2009 under the name EDGX Exchange, Inc. This Third Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Second Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Second Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe EDGX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Direct Edge LLC will be the sole owner of the Common Stock. Any sale, transfer or assignment by Direct Edge LLC Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person

was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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 Directors.

(f) The rights conferred on any Covered Person by this Article Sixth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation'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 corporation, 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 corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS EDGX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS EDGX EXCHANCE, INC By: Name: Edward T. Tilly Its: Chief Executive Officer

EIGHTH AMENDED AND RESTATED

BYLAWS OF

CBOE EDGX EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

(a) The term "Act" means the Securities Exchange Act of 1934, as amended.

(b) The term "affiliate" of a Person or "affiliated with" another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.

(c) The term "Board" means the Board of Directors of the Corporation.

(d) The term "Corporation" means Cboe EDGX Exchange, Inc.

(e) The term "Exchange" means the Corporation, its exchange market and any facilities thereof.

(f) The term "Exchange Member" shall have the same meaning as the term "Member" in the Rules of the Exchange.

(g) The term "Person" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.

(h) The term "Rules" means the rules of the Exchange as adopted or amended from time to time.

(i) The term "associated with an entity" means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.

(j) The term "Representative Director Nominating Body" shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, than the "Representative Director Nominating Body" shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one

upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided,

however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other 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.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall

not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

G Cboe Trading, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS TRADING, INC.", CHANGING ITS NAME FROM "BATS TRADING, INC." TO "CBOE TRADING, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:57 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



3986650 8100 SR# 20176643032

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203408772 Date: 10-17-17

State of Delaware Secretary of State Division of Corporations Delivered 09:57 PM 10/16/2017 FILED 09:57 PM 10/16/2017 SR 20176643032 - File Number 3986650

AMENDED AND RESTATED

CERTIFICATE OF

INCORPORATION OF

BATS TRADING, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on June 16, 2005. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation (as amended pursuant to those certain certificates of amendment filed with the Secretary of State of the State of Delaware on October 18, 2005, October 20, 2005, June 13, 2006 and November 10, 2009) was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe Trading, Inc.

SECOND: Its registered office in the State of Delaware is to be located at 1209 Orange Street, in the City of Wilmington, County of New Castle, Zip Code 19801. The registered agent in charge thereof is The Corporation Trust Company.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock which the corporation shall have authority to issue is One Thousand (1,000) and each such share is \$0.01 par value.

[Signature page follows]

IN WITNESS WHEREOF, Bats Trading, Inc. has caused this certificate to be signed as of this 17th day of October, 2017.

BATS TRADING, INC.

By: ______ Name: Troy Yezzel 0ľ

Its: President

FOURTH AMENDED AND RESTATED

BYLAWS OF

CBOE TRADING, INC.

(a Delaware corporation)

ARTICLEI.

OFFICES

1.1. <u>Principal and Business Offices</u>. The corporation may have such principal and other business offices, either within or without the State of Delaware, as the Board of Directors may designate or as the business of the corporation may require from time to time.

1.2. <u>Registered Office</u>. The registered office of the corporation required by the Delaware General Corporation Law to be maintained in the State of Delaware may be, but need not be, identical with the principal office in the State of Delaware, and the address of the registered office may be changed from time to time by the Board of Directors or by the registered agent. The business office of the registered agent of the corporation shall be identical to such registered office.

ARTICLE II.

STOCKHOLDERS

2.1. <u>Annual Meeting</u>. The annual meeting of the stockholders shall be held on the 1st Monday in November of each year (unless that date shall be a non-business day or legal holiday, in which event the annual meeting of the stockholders shall be held the first business day immediately following such date) for the purposes of electing directors and for the transaction of such other business as may come before the meeting.

2.2. <u>Special Meeting</u>. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute, may be called by the Board of Directors or the President or the Secretary or by the person, or in the manner, designated by the Board of Directors.

2.3. <u>Place of Meeting</u>. The Board of Directors may designate any place, either within or without the State of Delaware, as the place of meeting for any annual meeting or for any special meeting of stockholders called by the Board of Directors. If no designation is made, or if a special meeting be otherwise called, the place of meeting shall be the registered office of the corporation in the State of Delaware.

2.4. <u>Notice of Meeting</u>. Written notice stating the place, day and hour of the meeting of stockholders and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered to each stockholder of record entitled to vote at such meeting not less than ten (10) days (unless a longer period is required by law or the articles of incorporation) not more than sixty (60) days before the date of the meeting, either personally or by mail, by or at the direction of the Board of Directors, the President, the Secretary, or any other officer or persons calling the meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, addressed to the

stockholder at his address as it appears on the stock record books of the corporation, with postage thereon prepaid.

2.5. Adjournment. Any meeting of stockholders may be adjourned to reconvene at any place designated by vote of a majority of the shares represented thereat. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. No notice of the time or place of an adjournment need be given if the time and place are announced at the meeting at which an adjournment is taken, unless the adjournment is for more than thirty (30) days or a new record date is fixed for the adjourned meeting, in which case notice of the adjourned meeting shall be given to each stockholder. Unless a new record date for the adjourned meeting is fixed, the determination of stockholders of record entitled to notice or to vote at the meeting at which adjournment is taken shall apply to the adjourned meeting.

2.6. <u>Fixing of Record Date</u>. For the purpose of determining stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or stockholders entitled to receive payment of any dividend, or in order to make a determination of stockholders for any other proper purpose, the Board of Directors may fix in advance a date as the record date for any such determination of stockholders, such date in any case to be not more than sixty (60) days, and, in case of a meeting of stockholders, not less than ten (10) days prior to the date on which the particular action requiring such determination of stockholders is to be taken. If no record date is fixed, the record date for determining:

(a) stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given or, if notice if waived, at the close of business on the day next preceding the day on which the meeting is held;

(b) stockholders entitled to express consent to a corporate action m writing without meeting shall be the day on which the first written consent is expressed; or

(c) stockholders for any other purpose shall be the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

2.7. <u>Voting Records</u>. The officer having charge of the stock transfer books for shares of the corporation shall, at least ten (10) days before each meeting of stockholders, make a complete record of the stockholders entitled to vote at such meeting, arranged in alphabetical order, with the address of and the number of shares held by each. Such record shall be produced and kept open to the examination of any stockholders, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held as specified in the notice of the meeting or at the place of the meeting. The record shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholders present. The original stock transfer books shall be the only evidence as to who are the stockholders entitled to examine such record or transfer books or to vote at any meeting of stockholders.

2.8. <u>Quorum</u>. Except as otherwise provided in the certificate of incorporation, a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of stockholders, but in no event shall less than one-third of the shares entitled to vote constitute a quorum. If a quorum is present, the affirmative vote of the majority of the shares represented at the meeting and entitled to vote on the subject matter shall be the act of the stockholders unless the vote of a greater number or voting by classes is require by law or the certificates of incorporation. Though less than a quorum of the outstanding shares are represented at a meeting, a majority of the shares

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represented at a meeting which initially had a quorum may adjourn the meeting from time to time without further notice.

2.9. <u>Conduct of Meeting</u>. The President or, in his absence, a Vice President in the order provided under Section 4.6 or, in their absence, any person chosen by the stockholders present, shall call the meeting of the stockholders to order and shall act as chairman of the meeting. The Secretary of the corporation shall act as secretary of all meetings of the stockholders, but, in the absence of the Secretary, the presiding officer may appoint any other person to act as secretary of the meeting.

2.10. <u>Proxies</u>. At all meetings of stockholders, a stockholder entitled to vote may vote in person, by proxy, appointed in writing by the stockholder, or by his duly authorized attorney in fact. Such proxy shall be filed with the Secretary of the Corporation before or at the time of the meeting. Unless otherwise provided in the proxy and supported by sufficient interest, a proxy may be revoked at any time before it is voted, either by written notice filed with the Secretary or the acting secretary, or by oral notice given by the stockholder to the presiding officer during the meeting. The presence of a stockholder who has filed a proxy shall not of itself constitute a revocation: No proxy shall be valid after three (3) years from the date of its execution, unless otherwise provided in the proxy. The Board of Directors shall have the power and authority to make rules establishing presumptions as to the validity and sufficiency of proxies.

2.11. <u>Voting of Shares</u>. Each outstanding share shall be entitled to one vote upon each matter submitted to a vote at a meeting of stockholders, except to the extent that the voting rights of the shares of any class or classes are enlarged, limited or denied by the certificate of incorporation.

2.12. Voting of Shares by Certain Holders.

(a) <u>Other Corporations</u>. Shares standing in the name of another corporation may be voted either in person or by proxy, by the president of such corporation or any other officer appointed by such president. A proxy executed by any principal officer of such other corporation or assistant thereto shall be conclusive evidence of the signer's authority to act, in the absence of express notice to this corporation, given in writing to the Secretary of this corporation, of the designation of some other person by the board of directors or the bylaws of such other corporation.

(b) <u>Legal Representatives and Fiduciaries</u>. Shares held by any administrator, executor, guardian, conservator, trustee in bankruptcy, receiver, or assignee for creditors may be voted by a duly executed proxy, without a transfer of such shares to his name. Shares standing in the name of a fiduciary may be voted by him, either in person or by proxy. A proxy executed by a fiduciary, shall be conclusive evidence of the signer's authority to act, in the absence of express notice to this corporation, given in writing to the Secretary of this corporation, that such manner of voting is expressly prohibited or otherwise directed by the document creating the fiduciary relationship.

(c) <u>Pledgees</u>. A stockholder whose shares are pledged shall be entitled to vote such shares, unless in the transfer of the shares the pledgor has expressly authorized the pledgee to vote the shares and thereafter the pledgee, or his proxy, shall be entitled to vote the shares so transferred.

(d) <u>Treasury Stock and Subsidiaries</u>. Neither treasury shares, nor shares held by another corporation if a majority of the shares entitled to vote for the election of directors of such other corporation is held by this corporation, shall be voted at any meeting or counted in determining the total number of outstanding shares entitled to vote, but shares of its own issue held by its corporation in a fiduciary capacity, or held by such other corporation in a fiduciary capacity, may be voted and shall be counted in determining the total number of outstanding shares entitled to vote.

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(e) <u>Joint Holders</u>. Shares of record in the names of two or more persons or shares to which two or more persons have the same fiduciary relationship, unless the Secretary of the corporation is given notice otherwise and furnished with a copy of the instrument creating the relationship, may be voted as follows: (i) if voted by an individual, his vote binds all holders; or (ii) if voted by more than one holder, the majority vote binds all, unless the vote is evenly split in which case the shares may be voted proportionately, or according to the ownership interest as shown in the instrument filed with the Secretary of the corporation.

2.13. <u>Waiver of Notice by Stockholders</u>. Whenever any notice is required to be given to any stockholder of the corporation under the certificate of incorporation or bylaws or any provision of the Delaware General Corporation Law, a waiver thereof in writing, signed at any time, whether before or after the time of meeting, by the stockholder entitled to such notice, shall be deemed equivalent to the giving of such notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except where the person attends for the express purpose of objecting to the transaction of any business. Neither the business nor the purpose of any regular or special meeting of stockholders, directors or members of a committee of directors need be specified in the waiver.

2.14. <u>Stockholders Consent Without Meeting</u>. Any action required or permitted by the certificate of incorporation or bylaws or any provision of law to be taken at a meeting of the stockholders, may be taken without a meeting, prior notice or vote, if a consent in writing, setting forth the action so taken, shall be signed by the number of stockholders required to authorize such action at a meeting. If the action is authorized by less than unanimous consent, notice of the action shall be given to nonconsenting stockholders.

ARTICLE III.

BOARD OF DIRECTORS

3.1. <u>General Powers and Number</u>. The business and affairs of the corporation shall be managed by its Board of Directors. The number of directors of the corporation shall be one (1) or such other specific number as may be designated from time to time by resolution of the Board of Directors.

3.2. <u>Tenure and Qualifications</u>. Each director shall hold office until the next annual meeting of stockholders and until his successor shall have been qualified and elected, or until his prior death, resignation or removal. A director may be removed from office by affirmative vote of a majority of the outstanding shares entitled to vote for the election of such director, taken at a meeting of stockholders called for that purpose. A director may resign at any time by filing his written resignation with the Secretary of the corporation. Directors need not be residents of the State of Delaware or stockholders of the corporation.

3.3. <u>Regular Meetings</u>. A regular meeting of the Board of Directors shall be held without other notice than this by-law immediately after the annual meeting of stockholders, and each adjourned session thereof. The place of such regular meeting shall be the same as the place of the meeting of stockholders which precedes it, or such other suitable place as may be announced at such meeting of stockholders. The Board of Directors may provide, by resolution, the time and place, either within or without the State of Delaware, for the holding of additional regular meetings without other notice than such resolution.

3.4. Special Meetings. Special meetings of the Board of Directors may be called

by or at the request of the President, Secretary or Treasurer. The President or Secretary calling any special meeting of the Board of Directors may fix any place, either within or without the State of Delaware, as the place for holding any special meeting of the Board of Directors called by them, and if no other place is fixed the place of the meeting shall be the registered office of the corporation in the State of Delaware.

Notice; Waiver. Notice of each meeting of the Board of Directors (unless 3.5. otherwise provided in or pursuant to Section 3.3) shall be given to each director not less than twentyfour (24) hours prior to the meeting by giving oral, telephone or written notice to a director in person, or by telegram, or not less than three (3) days prior to a meeting by delivering or mailing notice to the business address or such other address as a director shall have designated in writing and filed with the Secretary. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail so addressed, with postage thereon prepaid. If notice be given by telegram, such notice shall be deemed to be delivered when the telegram is delivered to the telegraph company. Whenever any notice is required to be given to any director of the corporation under the certificate of incorporation or bylaws or any provision of law, a waiver thereof in writing, signed at any time, whether before or after the time of meeting, by the director entitled to such notice, shall be deemed equivalent to the giving of such notice. The attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting and objects thereat to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

3.6. <u>Quorum</u>. Except as otherwise provided by law or by the certificate of incorporation or these bylaws, a majority of the directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors, but in no event shall less than one-third of the directors constitute a quorum. A majority of the directors present (though less than such quorum) may adjourn the meeting from time to time without further notice.

3.7. <u>Manner of Acting</u>. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless the act of a greater number is required by law or by the certificate of incorporation or these bylaws.

3.8. <u>Conduct of Meetings</u>. The President, or, in his absence a Vice President in the order provided under Section 4.6, or, in their absence, any director chosen by the directors present, shall call meetings of the Board of Directors to order and shall act as chairman of the meeting. The Secretary of the corporation shall act as secretary of all meetings of the Board of Directors but in the absence of the Secretary, the presiding officer may appoint any Assistant Secretary or any director or other person present to act as secretary of the meeting.

3.9. <u>Vacancies</u>. Any vacancy occurring in the Board of Directors, including a vacancy created by an increase in the number of directors, may be filled until the next succeeding annual election by the affirmative vote of a majority of the directors then in office, though less than a quorum of the Board of Directors; provided, that in case of a vacancy created by the removal of a director by vote of the stockholders, the stockholders shall have the right to fill such vacancy at the same meeting or any adjournment thereof.

3.10. <u>Compensation</u>. The Board of Directors, by affirmative vote of a majority of the directors then in office, and irrespective of any personal interest of any of its members, may establish reasonable compensation of all directors for services to the corporation as directors, officers or otherwise, or may delegate such authority to an appropriate committee. The Board of Directors also

shall have authority to provide for or delegate authority to an appropriate committee to provide for reasonable pensions, disability or death benefits, and other benefits or payments, to directors, officers and employees and to their estates, families, dependents or beneficiaries on account of prior services rendered by such directors, officers and employees to the corporation.

3.11. <u>Presumption of Assent</u>. A director of the corporation who is present at a meeting of the Board of Directors or a committee thereof of which he is a member at which action on any corporate matter is taken unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary of the corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a director who voted in favor of such action.

3.12. <u>Committees</u>. The Board of Directors by resolution adopted by the affirmative vote of a majority of the directors may designate one or more committees, each committee to consist of one or more directors elected by the Board of Directors, which to the extent provided in said resolution as initially adopted, and as thereafter supplemented or amended by further resolution adopted by a like vote, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall fix its own rules governing the conduct of its activities and shall make such reports to the Board of Directors of its activities as the Board of Directors may request.

3.13. <u>Unanimous Consent Without Meeting</u>. Any action required or permitted by the certificate of incorporation or bylaws or any provision of law to be taken by the Board of Directors at a meeting or by a resolution of any committee thereof may be taken without a meeting if a consent in writing, setting forth the action so taken, filed with the minutes of the proceedings, shall be signed by all of the directors then in office.

3.14. <u>Telephonic Meetings</u>. Members of the Board of Directors, or any committee designated by the Board, may participate in a meeting of such Board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this by-law shall constitute presence in person at such meeting.

ARTICLE IV.

OFFICERS

4.1. <u>Number</u>. The principal officers of the corporation shall be a President, or any number of Vice Presidents, and a Secretary, each of whom shall be elected by the Board of Directors. Such other officers and assistant officers as may be deemed necessary may be elected or appointed by the Board of Directors. Any number of offices may be held by the same person.

4.2. <u>Election and Term of Office</u>. The officers of the corporation to be elected by the Board of Directors shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after each annual meeting of the stockholders. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until his successor shall have been duly elected or until his prior death, resignation or removal. Any officer may resign at any time upon written notice to the corporation. Failure to elect officers shall not dissolve or otherwise affect the corporation.

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4.3. <u>Removal</u>. Any officer or agent may be removed by the Board of Directors whenever in its judgment the best interests of the corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment shall not of itself create contract rights.

4.4. <u>Vacancies</u>. A vacancy in any principal office because of death, resignation, removal, disqualification or otherwise, shall be filled by the Board of Directors for the unexpired portion of the term.

President. The President shall be the principal executive officer of the corporation 4.5. and, subject to the control of the Board of Directors, shall, in general, supervise and control all of the business and affairs of the corporations. He shall, when present, preside at all meetings of the stockholders and of the Board of Directors. He shall have authority, subject to such rules as may be prescribed by the Board of Directors, to appoint such agents and employees of the corporation as he shall deem necessary, to prescribe their powers, duties and compensation, and to delegate authority to them. Such agents and employees shall hold office at the discretion of the President. He shall have authority to sign, execute and acknowledge, on behalf of the corporation, all deeds, mortgages, bonds, stock certificates, contracts, leases, reports and all other documents or instruments, of every conceivable kind and character whatsoever, necessary or proper to be executed in the course of the corporation's regular business, or which shall be authorized by resolution of the Board of Directors; and, except as otherwise provided by law or the Board of Directors, he may authorize any Vice President or other officer or agent of the corporation to sign, execute and acknowledge such documents or instruments in his place and stead. In general he shall perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

4.6. <u>The Vice President</u>. In the absence of the President or in the event of his death, inability or refusal to act, or in the event for any reason it shall be impracticable for the President to act personally, the Vice President, if one is elected, (or in the event there be more than one Vice President, the Vice Presidents in the order designated by the Board of Directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Any Vice President may sign, with the Secretary or Assistant Secretary, certificates for shares of the corporation; and shall perform such other duties and have such authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors. The execution of any instrument of the corporation by any Vice President shall be conclusive evidence, as to third parties, of his authority to act in the stead of the President.

4.7. <u>The Secretary</u>. The Secretary shall: (a) keep the minutes of the meetings of the stockholders and of the Board of Directors in one or more books provided for the purpose; (b) attest instruments to be filed with the Secretary of State; (c) see that all notices are duly given in accordance with the provisions of these bylaws or as required by law; (d) be custodian of the corporate records and of the seal of the corporation and see that the seal of the corporation is affixed to all documents the execution of which on behalf of the corporation under its seal is duly authorized; (e) keep or arrange for the keeping of a register of the post office address of each stockholder which shall be furnished to the Secretary by such stockholder; (f) sign with the President, or a Vice President, certificates for shares of the corporation, the issuance of which shall have been authorized by resolution of the Board of Directors; (g) have general charge of the stock transfer books of the corporation; and (h) in general perform all duties incident to the office of Secretary and have such other duties and exercise such authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors.

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4.8. <u>The Treasurer</u>. The Treasurer shall: (a) have charge and custody of and be responsible for all funds and securities of the corporation; (b) receive and give receipts for moneys due and payable to the corporation from any source whatsoever, and deposit all such moneys in the name of the corporation in such banks, trust companies or other depositaries as shall be selected in accordance with the provisions of Section 5.3; and (c) in general perform all of the duties incident to the office of Treasurer and have such other duties and exercise such other authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors. If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his duties in such sum and with such surety or sureties as the Board of Directors shall determine.

4.9. <u>Assistant Secretaries and Assistant Treasurers</u>. There shall be such number of Assistant Secretaries and Assistant Treasurers as the Board of Directors may from time to time authorize, if any. The Assistant Secretaries may sign with the President or a Vice President certificates for shares of the corporation the issuance of which shall have been authorized by a resolution of the Board of Directors. The Assistant Treasurers shall respectively, if required by the Board of Directors, give bonds for the faithful discharge of the duties in such sums and with such sureties as the Board of Directors shall determine. the Assistant Secretaries and Assistant Treasurers, in general, shall perform such duties and have such authority as shall from time to time be delegated or assigned to them by the Secretary or the Treasurer, respectively, or by the President or the Board of Directors.

4.10. <u>Other Assistants and Acting Officers</u>. The Board of Directors shall have the power to appoint any person to act as assistant to any officer, or as agent for the corporation in his stead, or to perform the duties of such officer whenever for any reason it is impracticable for such officer to act personally, and such assistant or acting officer or other agent so appointed by the Board of Directors shall have the power to perform all the duties of the office to which he is so appointed to be an assistant, or as to which he is so appointed to act, excerpt as such power may be otherwise defined or restricted by the Board of Directors.

4.11. <u>Salaries</u>. The salaries of the principal officers shall be fixed from time to time by the Board of Directors or by a duly authorized committee thereof, and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the corporation.

ARTICLE V.

CONTRACTS, LOAN, CHECKS AND DEPOSITS;

SPECIAL CORPORATE ACTS

5.1. <u>Contracts</u>. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute or deliver any instrument in the name of an on behalf of the corporation, and such authorization may be general or confined to specific instances. In the absence of other designation, all deeds, mortgages and instruments of assignment or pledge made by the corporation shall be executed in the name of the corporation by the President or a Vice President and by the Secretary, an Assistant Secretary, the Treasurer or an Assistant Treasurer; the Secretary or an Assistant Secretary, when necessary or required, shall affix the corporate seal thereto; and when so executed no other party to such instrument or any third party shall be required to make any inquiry into the authority of the signing officer or officers.

5.2. Loans. No indebtedness for borrowed money shall be contracted on behalf of

the corporation and no evidences of such indebtedness shall be issued in its name unless authorized by or under the authority of a resolution of the Board of Directors. Such authorization may be general or confined to specific instances.

5.3. <u>Deposits</u>. All funds of the corporation not otherwise employed shall be deposited from time to the credit of the corporation in such banks, trust companies or other depositaries as may be selected by or under the authority of a resolution of the Board of Directors.

5.4. <u>Voting of Securities Owned by this Corporation</u>. Subject always to the specific directions of the Board of Directors, (a) any shares or other securities issued by any other corporation and owned or controlled by this corporation may be voted at any meeting of security holders of such other corporation by the President of this corporation if he is present, or in his absence, by a Vice President of this corporation who may be present, and (b) whenever, in the judgment of the President, or in his absence, of a Vice President, it is desirable for this corporation to execute a proxy or written consent in respect to any shares or other securities issued by any other corporation by the President of this corporation, such proxy or consent shall be executed in the name of this corporation by the President of Directors affixation of corporate seal or countersignature or attestation by another officer. Any person or persons designated in the manner above stated as the proxy or proxies of this corporation shall have full right, power and authority to vote the shares or other securities issued by such other corporation and owned by its corporation.

ARTICLE VI.

CERTIFICATES FOR SHARES AND THEIR TRANSFER

6.1. <u>Certificates for Shares</u>. Certificates representing shares of the corporation shall be in such form, consistent with law, as shall be determined by the Board of Directors. Such certificates shall be signed by the President or a Vice President and by the Secretary or an Assistant Secretary or Treasurer or Assistant Treasurer. All certificates for shares shall be consecutively numbered or otherwise identified. The name and address of the person to whom the shares represented thereby are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the corporation. All certificates surrendered to the corporation for transfer shall be canceled and no new certificate shall be issued until the former certificate for a like number of shares shall have been surrendered and canceled, except as provided in Section 6.6.

6.2. <u>Facsimile Signatures and Seal</u>. The seal of the corporation on any certificates for shares may be a facsimile. The signature of the President or Vice President and the Secretary or Assistant Secretary upon a certificate may be facsimiles if the certificate is manually signed on behalf of a transfer agent, or a registrar, other than the corporation itself or an employee of the corporation.

6.3. <u>Signature by Former Officers</u>. In case any officer, who has signed or whose facsimile signature has been placed upon any certificate for shares, shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer at the date of its issue.

6.4. <u>Transfer of Shares</u>. Prior to due presentment of a certificate for shares for registration of transfer, the corporation may treat the registered owner of such shares as the person exclusively entitled to vote, to receive notifications and otherwise to have and exercise all the rights

and power of an owner. Where a certificate for shares is presented to the corporation with a request to register for transfer, the corporation shall not be liable to the owner or any other person suffering loss as a result of such registration of transfer if (a) there were on or with the certificate the necessary endorsements, and (b) the corporation had no duty to inquire into adverse claims or has discharged by such duty. The corporation may require reasonable assurance that said endorsements are genuine and effective and compliance with such other regulations as may be prescribed by or under the authority of the Board of Directors. Where a transfer of shares is made for collateral security, and not absolutely, it shall be so expressed in the entry of transfer if, when the shares are presented, both the transferor and the transferee so request.

6.5. <u>Restrictions on Transfer</u>. The face or reverse side of each certificate representing shares shall bear a conspicuous notation of any restriction imposed by the corporation upon the transfer of such shares. Otherwise the restriction is invalid except against those with actual knowledge of the restrictions.

6.6. Lost, Destroyed or Stolen Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the person requesting such new certificate or certificates, to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

6.7. <u>Consideration for Shares</u>. The shares of the corporation may be issued for such consideration as shall be fixed from time to time by the Board of Directors, consistent with the laws of the State of Delaware.

6.8. <u>Stock Regulations</u>. The Board of Directors shall have the power and authority to make all such further rules and regulations not inconsistent with the statutes of the State of Delaware as it may deem expedient concerning the issue, transfer and registration of certificates representing shares of the corporation.

ARTICLE VII.

SEAL

7.1. The Board of Directors may, at their discretion, provide a corporate seal in an appropriate form.

ARTICLE VIII.

FISCAL YEAR

8.1. The fiscal year of the corporation shall begin on the first day of January and end on the last day of December in each year.

ARTICLE IX.

AMENDMENTS

9.1. <u>By Stockholders</u>. These bylaws may be adopted, amended or repealed and new bylaws may be adopted by the stockholders entitled to vote at the stockholders' annual meeting without prior notice or any other meeting provided the amendment under consideration has been set forth in the notice of meeting, by affirmative vote of net less than a majority of the shares present or represented at any meeting at which a quorum is in attendance.

9.2. <u>By Directors</u>. These bylaws may be adopted, amended or repealed by the Board of Directors as provided in the certificate of incorporation by the affirmative vote of a majority of the number of directors present at any meeting at which a quorum is in attendance; but no by-law adopted by the stockholders shall be amended or repealed by the Board of Directors if the bylaws so provide.

9.3. <u>Implied Amendments</u>. Any action taken or authorized by the Board of Directors, which would be inconsistent with the bylaws then in effect but it taken or authorized by affirmative vote of not less than the number of directors required to amend the bylaws so that the bylaws would be consistent with such action, shall be given the same effect as though the bylaws had been temporarily amended or suspended so far, but only so far, as is necessary to permit the specific action so taken or authorized.

ARTICLE X.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

10.1. <u>Indemnification of Directors, Officers and Employees</u>. The Corporation shall indemnify to the full extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that the person, his or her testator or intestate is or was a director, officer or employee of the Corporation or any predecessor of the Corporation.

H Omicron Acquisition Corp.

Cboe FX Holdings, LLC

I



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS HOTSPOT HOLDINGS LLC", CHANGING ITS NAME FROM "BATS HOTSPOT HOLDINGS LLC" TO "CBOE FX HOLDINGS, LLC", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:22 O`CLOCK P.M.



3229145 8100 SR# 20176652042

You may verify this certificate online at corp.delaware.gov/authver.shtml

Jeffrey W. Bullock, Secretary of State

Authentication: 203410772 Date: 10-17-17

Page 1

State of Delaware Secretary of State Division of Corporations Delivered 12:22 PM 10/17/2017 FILED 12:22 PM 10/17/2017 SR 20176652042 - File Number 3229145

AMENDED AND RESTATED

CERTIFICATE OF FORMATION

OF

BATS HOTSPOT HOLDINGS LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on March 11, 2015 under the name Hotspot FX Holdings, LLC. This Amended and Restated Certificate of Formation of the LLC, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment filed with the Secretary of State of the State of Delaware on March 13, 2015 and February 19, 2016), has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

FIRST: The name of the limited liability company is Cboe FX Holdings, LLC.

SECOND: The address of the LLC's registered office in the State of Delaware is The Corporation Trust Company, 1209 Orange Street, Wilmington, DE 19801, and its registered agent at such address is The Corporation Trust Company.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot Holdings LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT HOLDINGS LLC

ß By: Name: Edward T. Tilly Title: Chief Executive Officer

J Cboe FX Markets, LLC

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Oct 17 2017 12:54PM CT Corp 6095381130

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10:53:12 a.m.

AMENDED AND RESTATED

CERTIFICATE OF FORMATION

OF

BATS HOTSPOT LLC

The limited liability company filed its original Certificate of Formation with the Department of the Treasury of the State of New Jersey on August 7, 2001 under the name Hotspot FX 2, L.L.C., and subsequently amended its certificate of formation (i) on November 26, 2001, to change its name to Hotspot FXi, L.L.C., (ii) on May 5, 2006, to change its registered agent, (iii) on September 25, 2009, to change its name to Hotspot FX LLC, (iv) on October 22, 2012, to change its name to Knight Hotspot FX LLC, (v) on July 2, 2013 to change its name to KCG Hotspot FX LLC and (vi) on February 19, 2016, to change its name to BATS Hotspot LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment referenced above), has been duly executed and is being filed in accordance with the Revised Uniform Limited Liability Company Act of the State of New Jersey (NJ Rev Stat § 42:2C-1 et. seq.). The Certificate of Formation of the limited liability company is hereby amended, Integrated and restated in its entirety to read as follows:

- 1. The name of the company is Choe FX Markets, LLC (the "Company").
- 2. The address of the registered office of the Company in the State of New Jersey is 820 Bear Tavern Road, West Trenton, NJ 08628.
- 3. The name and address of the registered agent for service of process on the Company in the State of New Jersey is The Corporation Trust Company, 820 Bear Tavern Road, West Trenton, NJ 08/28.

4. The Company is to have perpetual existence.

[Signature page follows]

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609-984-6850 Oct 17 2017 12:54PM CT Corp 6095381130

page 3

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IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT LLC

By: Name: Edward T. Tilly Title: Chief Executive Officer

K Cboe FX Services LLC

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CERTIFICATE OF FORMATION	06	00219344
OF		• • • •

BATS HOTSPOT SERVICES LLC

The limited liability company filed its original Certificate of Formation with the Department of the Treasury of the State of New Jersey on November 22, 2004 under the name Hotspot FXr, L.L.C., and subsequently amended its certificate of formation (i) on May 5, 2006, to change its registered agent and (ii) on February 19, 2016, to change its name to Bats Hotspot Services LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment referenced above), has been duly executed and is being filed in accordance with the Revised Uniform Limited Liability Company Act of the State of New Jersey (NJ Rev Stat § 42:2C-1 et. seq.). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the company is Cboe FX Services, LLC (the "Company").

2. The address of the registered office of the Company in the State of New Jersey is 820 Bear Tavern Road, West Trenton, NJ 08628.

3. The name and address of the registered agent for service of process on the Company in the State of New Jersey is The Corporation Trust Company, 820 Bear Tavern Road, West Trenton, NJ 08928.

The Company is to have perpetual existence.

[Signature page follows]

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page 3

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot Services LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT SERVICES LLC

By: 21 Name: Edward T. Tilly Title: Chief Executive Officer

L

M Cboe FX Europe Limited



CERTIFICATE OF INCORPORATION

ON CHANGE OF NAME

Company Number 9424751

The Registrar of Companies for England and Wales hereby certifies that under the Companies Act 2006:

BATS HOTSPOT EUROPE LIMITED

a company incorporated as private limited by shares, having its registered office situated in England and Wales, has changed its name to:

CBOE FX EUROPE LIMITED

Given at Companies House on 17th October 2017.

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006





N Bats Hotspot Asia Pte. Ltd.

O Bats Trading Limited

P Chi-X Europe Limited

Q Cboe ETF.com, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS ETF.COM, INC.", CHANGING ITS NAME FROM "BATS ETF.COM, INC." TO "CBOE ETF.COM, INC.", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:18 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



Jeffrey W. Butlock, Se of State

Authentication: 203410744 Date: 10-17-17

Page 1

6001013 8100 SR# 20176652041

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware Secretary of State Division of Corporations Delivered 12:18 PM 10/17/2017 FILED 12:18 PM 10/17/2017 SR 20176652041 - File Number 6001013

AMENDED AND RESTATED

CERTIFICATE OF

INCORPORATION OF

BATS ETF.COM, INC.

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on March 28, 2016. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe ETF.com, Inc. (the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of the registered agent of the Corporation at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("Delaware Law") as the same exists or may hereafter be amended.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 1,000, and the par value of each such share is \$0.01, amounting in the aggregate to \$10.00.

FIFTH: The Board of Directors shall have the power to adopt, amend or repeal the bylaws of the Corporation.

SIXTH: Election of directors need not be by written ballot unless the bylaws of the Corporation so provide.

SEVENTH: The Corporation expressly elects not to be governed by Section 203 of Delaware Law.

EIGHTH: (1) A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted under Delaware Law.

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(2)(a) Each person (and the heirs, executors or administrators of such person) who was or is a party or is threated to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by Delaware Law. The right to indemnification conferred in this ARTICLE EIGHTH shall also include the right to be paid by the Corporation to the fullest extent authorized by Delaware Law. The right to indemnification conferred in this ARTICLE EIGHTH shall also include the right to indemnification conferred in this ARTICLE EIGHTH shall be a contract right.

(b) The Corporation may, by action of its Board of Directors, provide indemnification to such of the employees and agents of the Corporation to such extent and to such effect as the Board of Directors shall determine to be appropriate and authorized by Delaware Law.

(3) The Corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss incurred by such person in any such capacity or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under Delaware Law.

(4) The rights and authority conferred in this ARTICLE EIGHTH shall not be exclusive of any other right which any person may otherwise have or hereafter acquire.

(5) Neither the amendment nor repeal of this ARTICLE EIGHTH, nor the adoption of any provision of this Certificate of Incorporation or the bylaws of the Corporation, nor, to the fullest extent permitted by Delaware Law, any modification of law, shall adversely affect any right or protection of any person granted pursuant hereto existing at, or arising out of or related to any event, act or omission that occurred prior to, the time of such amendment, repeal, adoption or modification (regardless of when any proceeding (or part thereof) relating to such event, act or omission arises or is first threatened, commenced or completed).

NINTH: The Corporation reserves the right to amend this Certificate of Incorporation in any manner permitted under Delaware Law and all rights and powers conferred herein on stockholders, directors and officers, if any, are subject to this reserved power.

[Signature page follows]

IN WITNESS WHEREOF, Bats ETF.com, Inc. has caused this certificate to be signed as of this 17th day of October, 2017.

BATS ETF.COM, INC. By: Name: Chris Concannon

Its: President and Chief Operating Officer

R INDEXPUBS S.A.

S Bats Hotspot IB LLC

T Bats Hotspot SEF LLC

Bats Worldwide Holdings Limited

. ~.

U

V Cboe Global Markets, Inc.



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CBOE HOLDINGS, INC.", CHANGING ITS NAME FROM "CBOE HOLDINGS, INC." TO "CBOE GLOBAL MARKETS, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 5:53 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4205301 8100 SR# 20176641280

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203406057 Date: 10-16-17

Page 1

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

State of Delaware Secretary of State Division of Corporations Delivered 05:53 PM 10/16/2017 FILED 05:53 PM 10/16/2017 SR 20176641280 - File Number 4205301

OF

CBOE HOLDINGS, INC.

CBOE Holdings, Inc., a corporation organized under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

- 1. The Corporation was incorporated on August 15, 2006.
- 2. This Third Amended and Restated Certificate of Incorporation has been duly adopted by the Board of Directors of the Corporation in accordance with Section 242(b)(1) and Section 245 of the General Corporation Law of the State of Delaware (the "GCL"). This Third Amended and Restated Certificate of Incorporation only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the GCL in order to change the name of the Corporation) the provisions of the Second Amended and Restated Certificate of Incorporations.
- 3. The text of the Third Amended and Restated Certificate of Incorporation as amended, integrated and restated shall read in full as follows:

FIRST: The name of the corporation is Cboe Global Markets, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the GCL.

FOURTH: (a) Authorized Stock. The total number of shares of all classes of capital stock that the Corporation is authorized to issue is three hundred forty-five million (345,000,000) shares, of which:

(i) 325,000,000 shares shall be shares of Voting Common Stock, par value \$.01 per share (the "*Common Stock*"); and

(ii) 20,000,000 shares shall be shares of preferred stock, par value \$.01 per share (the "*Preferred Stock*").

(b) *Common Stock*. All shares of Common Stock shall have the same rights, powers and preferences.

(c) *Preferred Stock.* The Board of Directors of the Corporation (the "*Board*") is authorized, by resolution or resolutions, subject to any limitations prescribed by law, to provide for the issuance of shares of Preferred Stock in one or more series, and by filing a certificate of designations pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the

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designation, powers, preferences, and rights of the shares of each such series and any qualifications, limitations or restrictions thereof, including without limitation the following:

(i) the distinctive serial designation of such series that shall distinguish it from other series;

(ii) the number of shares of such series, which number the Board may thereafter (except where otherwise provided in the certificate of designations) increase or decrease (but not below the number of shares of such series then outstanding);

(iii) whether dividends shall be payable to the holders of the shares of such series and, if so, the basis on which such holders shall be entitled to receive dividends (which may include, without limitation, a right to receive such dividends or distributions as may be declared on the shares of such series by the Board, a right to receive such dividends or distributions, or any portion or multiple thereof, as may be declared on the Common Stock or any other class of stock or, in addition to or in lieu of any other right to receive dividends, a right to receive dividends at a particular rate or at a rate determined by a particular method, in which case such rate or method of determining such rate may be set forth), the form of such dividend, any conditions on which such dividends shall be payable and the date or dates, if any, on which such dividends shall be payable;

(iv) whether dividends on the shares of such series shall be cumulative and, if so, the date or dates or method of determining the date or dates from which dividends on the shares of such series shall be cumulative;

(v) the amount or amounts, if any, which shall be payable out of the assets of the Corporation to the holders of the shares of such series upon the voluntary or involuntary liquidation, dissolution or winding-up of the Corporation, and the relative rights of priority, if any, of payment of the shares of such series;

(vi) the price or prices (in cash, securities or other property or a combination thereof) at which, the period or periods within which and the terms and conditions upon which the shares of such series may be redeemed, in whole or in part, at the option of the Corporation or at the option of the holder or holders thereof or upon the happening of a specified event or events;

(vii) the obligation, if any, of the Corporation to purchase or redeem shares of such series pursuant to a sinking fund or otherwise and the price or prices (in cash, securities or other property or a combination thereof) at which, the period or periods within which and the terms and conditions upon which the shares of such series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(viii) whether or not the shares of such series shall be convertible or exchangeable, at any time or times at the option of the holder or holders thereof or at the option of the Corporation or upon the happening of a specified event or events, into shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation or any other securities or property of the Corporation or any other entity, and the price or prices (in cash, securities or other property or a combination thereof) or rate or rates of conversion or exchange and any adjustments applicable thereto;

(ix) whether or not the holders of the shares of such series shall have voting rights, in addition to the voting rights required by law, and if so the terms of such voting rights, which may provide, among other things and subject to the other provisions of this Certificate of

Incorporation, that each share of such series shall carry one vote or more or less than one vote per share, that the holders of such series shall be entitled to vote on certain matters as a separate class (which for such purpose may be comprised solely of such series or of such series and one or more other series or classes of stock of the Corporation); and

(x) any other relative rights, powers, preferences and limitations of this series.

For all purposes, this Certificate of Incorporation shall include each certificate of designations (if any) setting forth the terms of a series of Preferred Stock. Subject to the rights, if any, of the holders of any series of Preferred Stock set forth in a certificate of designations, an amendment of this Certificate of Incorporation to increase or decrease the number of authorized shares of Preferred Stock (but not below the number of shares thereof then outstanding) may be adopted by resolution adopted by the Board and approved by the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of Preferred Stock, voting as a separate class, shall be required therefor, unless a vote of any such holders is required pursuant to the terms of any Preferred Stock designation.

Except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment of this Certificate of Incorporation that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Preferred Stock if the holders of any such series are entitled, either separately or together with the holders of one or more other series of Preferred Stock, to vote thereon pursuant to this Certificate of Incorporation or the certificate of designations relating to such series of Preferred Stock, or pursuant to the GCL as then in effect.

FIFTH: (a) Definitions. As used in this Certificate of Incorporation:

(i) the term "Act" shall mean the Securities Exchange Act of 1934, as amended;

(ii) the term "beneficially owned" shall have the meaning set forth in Rule 13d-3 and 13d-5 under the Act, as amended;

(iii) the term "CBOE" shall mean the Chicago Board Options Exchange, Incorporated;

(iv) the term "*Person*" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof;

(v) the term "*Regulated Securities Exchange Subsidiary*" shall mean any national securities exchange controlled, directly or indirectly, by the Corporation, including, but not limited to CBOE; and

(vi) the term "*Related Persons*" shall mean (A) with respect to any Person, all "affiliates" (as such term is defined in Rule 12b-2 under the Act) of such Person; (B) any Person associated with a member (as the phrase "Person associated with a member" is defined under Section 3(a)(21) of the Act); (C) any two or more Persons that have any agreement, arrangement or understanding (whether or not in writing) to act together for the purpose of acquiring, voting, holding or disposing of shares of the capital stock of the Corporation; (D) in the case of a Person that is a company, corporation or similar entity, any executive officer (as defined under Rule 3b-7 of the Act) or director of such Person and, in the case of a Person that is a partnership or a limited liability company, any general partner, managing member or

manager of such Person, as applicable; (E) in the case of a Person that is a natural person, any relative or spouse of such natural person, or any relative of such spouse who has the same home as such natural person or who is a director or officer of the Corporation or any of the Corporation's parents or subsidiaries; (F) in the case of a Person that is an executive officer (as defined under Rule 3b-7 under the Act), or a director of a company, corporation or similar entity, such company, corporation or entity, as applicable; and (G) in the case of a Person that is a general partner, managing member or manager of a partnership or limited liability company, such partnership or limited liability, as applicable.

SIXTH: (a) Voting Limitations. Notwithstanding any other provision of this Certificate of Incorporation, (x) no Person, either alone or together with its Related Persons, as of any record date for the determination of stockholders entitled to vote on any matter, shall be entitled to vote or cause the voting of shares of stock of the Corporation, beneficially owned directly or indirectly by such Person or its Related Persons, in person or by proxy or through any voting agreement or other arrangement, to the extent that such shares represent in the aggregate more than 20% of the then outstanding votes entitled to be cast on such matter, without giving effect to this Article Sixth, and the Corporation shall disregard any such votes purported to be cast in excess of such limitation; and (y) if any Person, either alone or together with its Related Persons, is party to any agreement, plan or other arrangement relating to shares of stock of the Corporation entitled to vote on any matter with any other Person, either alone or together with its Related Persons, under circumstances that would result in shares of stock of the Corporation that would be subject to such agreement, plan or other arrangement not being voted on any matter, or the withholding of any proxy relating thereto, where the effect of such agreement, plan or other arrangement would be to enable any Person with the right to vote any shares of stock of the Corporation, but for this Article Sixth, either alone or together with its Related Persons, to vote, possess the right to vote or cause the voting of shares of stock of the Corporation that would exceed 20% of the then outstanding votes entitled to be cast on such matter (assuming that all shares of stock of the Corporation that are subject to such agreement, plan or arrangement are not outstanding votes entitled to be cast on such matter) (the "Recalculated Voting Limitation"), then the Person with such right to vote shares of stock of the Corporation, either alone or together with its Related Persons, shall not be entitled to vote or cause the voting of shares of stock of the Corporation beneficially owned by such Person, either alone or together with its Related Persons, in person or by proxy or through any voting agreement or other arrangement, to the extent that such shares represent in the aggregate more than the Recalculated Voting Limitation, and the Corporation shall disregard any such votes purported to be cast in excess of the Recalculated Voting Limitation.

(i) The limitations set forth in this Section (a), as applicable, shall apply to each Person unless and until:

(A) such Person shall have delivered to the Corporation, not less than 45 days (or such shorter period as the Board shall expressly consent to) prior to any vote, a notice in writing, of such Person's intention, either alone or together with its Related Persons, to vote or cause the voting of shares of stock of the Corporation beneficially owned by such Person or its Related Persons, in person or by proxy or through any voting agreement or other arrangement, in excess of the such limitations, as applicable;

(B) the Board shall have resolved to expressly permit such voting; and

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(C) such resolution shall have been filed with, and approved by, the Securities and Exchange Commission ("SEC") under Section 19(b) of the Act, and shall have become effective thereunder.

(ii) Subject to its fiduciary obligations under applicable law, the Board shall not adopt any resolution pursuant to clause (B) of Section (a)(i) of this Article Sixth unless the Board shall have determined that:

(A) the exercise of such voting rights or the entering into of such agreement, plan or other arrangement, as applicable, by such Person, either alone or together with its Related Persons, will not impair the ability of either the Corporation or any Regulated Securities Exchange Subsidiary to discharge its respective responsibilities under the Act and the rules and regulations thereunder and is otherwise in the best interests of the Corporation, its stockholders and the Regulated Securities Exchange Subsidiaries;

(B) the exercise of such voting rights or the entering into of such agreement, plan or other arrangement, as applicable, by such Person, either alone or together with its Related Persons, will not impair the SEC's ability to enforce the Act;

(C) in the case of a resolution to approve the exercise of voting rights in excess of 20% of the then outstanding votes entitled to be cast on such matter, (x) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) and (y) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a "Trading Permit Holder" (as defined in the Bylaws of any Regulated Securities Exchange Subsidiary as they may be amended from time to time) (any such Person that is a Related Person of such Trading Permit Holder shall hereinafter also be deemed to be a Trading Permit Holder for purposes of this Certificate of Incorporation, as the context may require); and

(D) in the case of a resolution to approve the entering into of an agreement, plan or other arrangement under circumstances that would result in shares of stock of the Corporation that would be subject to such agreement, plan or other arrangement not being voted on any matter, or the withholding of any proxy relating thereto, where the effect of such agreement, plan or other arrangement would be to enable any Person, but for this Article Sixth, either alone or together with its Related Persons, to vote, possess the right to vote or cause the voting of shares of stock of the Corporation that would exceed 20% of the then outstanding votes entitled to be cast on such matter (assuming that all shares of stock of the Corporation that are subject to such agreement, plan or other arrangement are not outstanding votes entitled to be cast on such matter), (x) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) and (y) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a Trading Permit Holder.

In making such determinations, the Board may impose such conditions and restrictions on such Person and its Related Persons owning any shares of stock of the Corporation entitled to vote on any matter as the Board may in its sole discretion deem necessary, appropriate or desirable in furtherance of the objectives of the Act and the governance of the Corporation. (iii) If and to the extent that shares of stock of the Corporation beneficially owned by any Person or its Related Persons are held of record by any other Person, this Section (a) shall be enforced against such record owner by limiting the votes entitled to be cast by such record owner in a manner that will accomplish the limitations contained in this Section (a) applicable to such Person and its Related Persons.

(iv) The limitations set forth in the first paragraph of this Section (a) shall not apply to (x) any solicitation of any revocable proxy from any stockholder of the Corporation by or on behalf of the Corporation or by any officer or director of the Corporation acting on behalf of the Corporation or (y) any solicitation of any revocable proxy from any stockholder of the Corporation by any other stockholder that is conducted pursuant to, and in accordance with, Regulation 14A promulgated pursuant to the Act (other than a solicitation pursuant to Rule 14a-2(b)(2) promulgated under the Act, with respect to which this Section (a) of this Article Sixth shall apply).

(v) For purposes of this Section (a), no Person shall be deemed to have any agreement, arrangement or understanding to act together with respect to voting shares of stock of the Corporation solely because such Person or any of such Person's Related Persons has or shares the power to vote or direct the voting of such shares of stock as a result of (x) any solicitation of any revocable proxy from any stockholder of the Corporation by or on behalf of the Corporation or by any officer or director of the Corporation acting on behalf of the Corporation or (y) any solicitation of any revocable proxy from any stockholder of the Corporation by any other stockholder that is conducted pursuant to, and in accordance with, Regulation 14A promulgated pursuant to the Act (other than a solicitation pursuant to Rule 14a-2(b)(2) promulgated under the Act, with respect to which this Section (a) of this Article Sixth shall apply), except if such power (or the arrangements relating thereto) is then reportable under Item 6 of Schedule 13D under the Act (or any similar provision of a comparable or successor report).

(b) Ownership Concentration Limitation. Except as otherwise provided in this Section (b), no Person, either alone or together with its Related Persons, shall be permitted at any time to beneficially own directly or indirectly shares of stock of the Corporation representing in the aggregate more than 20% of the then outstanding shares of stock of the Corporation (the "Ownership Limitation").

(i) The Ownership Limitation shall apply to each Person unless and until: (x) such Person shall have delivered to the Corporation not less than 45 days (or such shorter period as the Board shall expressly consent to) prior to the acquisition of any shares that would cause such Person (either alone or together with its Related Persons) to exceed the Ownership Limitation, a notice in writing, of such Person's intention to acquire such ownership; (y) the Board shall have resolved to expressly permit such ownership; and (z) such resolution shall have been filed with, and approved by, the SEC under Section 19(b) of the Act and shall have become effective thereunder.

(ii) Subject to its fiduciary obligations under applicable law, the Board shall not adopt any resolution permitting ownership in excess of the Ownership Limitation unless the Board shall have determined that:

(A) such acquisition of beneficial ownership by such Person, either alone or together with its Related Persons, will not impair the ability of any Regulated Securities Exchange

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Subsidiary to discharge its responsibilities under the Act and the rules and regulations thereunder and is otherwise in the best interests of the Corporation, its stockholders and the Regulated Securities Exchange Subsidiaries;

(B) such acquisition of beneficial ownership by such Person, either alone or together with its Related Persons, will not impair the SEC's ability to enforce the Act. In making such determinations under clauses (A) and (B) of this Section (b)(ii), the Board may impose such conditions and restrictions on such Person and its Related Persons owning any shares of stock of the Corporation entitled to vote on any matter as the Board may in its sole discretion deem necessary, appropriate or desirable in furtherance of the objectives of the Act and the governance of the Corporation;

(C) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act); and

(D) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a Trading Permit Holder.

(iii) Unless the conditions specified in Section (b)(i) of this Article Sixth are met, if any Person, either alone or together with its Related Persons, at any time beneficially owns shares of stock of the Corporation in excess of the Ownership Limitation, the Corporation shall be obligated to redeem promptly, at a price equal to the par value of such shares of stock and to the extent funds are legally available therefor, that number of shares of stock of the Corporation necessary so that such Person, together with its Related Persons, shall beneficially own directly or indirectly shares of stock of the Corporation representing in the aggregate no more than 20% of the then outstanding shares of the Corporation, after taking into account that such redeemed shares shall become treasury shares and shall no longer be deemed to be outstanding.

(c) *Redemptions*.

In the event the Corporation shall redeem shares of stock (the "Redeemed Stock") (i) of the Corporation pursuant to any provision of this Article Sixth, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than five business nor more than 60 calendar days prior to the redemption date, to the holder of the Redeemed Stock, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (w) the redemption date; (x) the number of shares of Redeemed Stock to be redeemed; (y) the aggregate redemption price, which shall equal the aggregate par value of such shares; and (z) the place or places where such Redeemed Stock is to be surrendered for payment of the aggregate redemption price. Failure to give notice as aforesaid, or any defect therein, shall not affect the validity of the redemption of Redeemed Stock. From and after the redemption date (unless the Corporation shall default in providing funds for the payment of the redemption price), the shares of Redeemed Stock which have been redeemed as aforesaid shall become treasury shares and shall no longer be deemed to be outstanding, and all rights of the holder of such Redeemed Stock as a stockholder of the Corporation (except the right to receive from the Corporation the redemption price against delivery to the Corporation of evidence of ownership of such shares) shall cease.

(ii) If and to the extent that shares of stock of the Corporation beneficially owned by any Person or its Related Persons are held of record by any other Person, this Article Sixth shall

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be enforced against such record owner by requiring the redemption of shares of stock of the Corporation held by such record owner in accordance with this Article Sixth, in a manner that will accomplish the Ownership Limitation applicable to such Person and its Related Persons.

(d) *Right to Information.* The Corporation shall have the right to require any Person and its Related Persons that the Board reasonably believes (x) to be subject to the limitations contained in Section (a) of this Article Sixth, (y) to beneficially own shares of stock of the Corporation entitled to vote on any matter in excess of the Ownership Limitation, or (z) to beneficially own an aggregate of 5% or more of the then outstanding shares of stock of the Corporation entitled to vote on any matter, which ownership such Person, either alone or together with its Related Persons, has not reported to the Corporation, to provide to the Corporation beneficially owned by such Person and its Related Persons and any other factual matter relating to the applicability or effect of this Article Sixth as may reasonably be requested of such Person and its Related Persons. Any constructions, applications or determinations made by the Board pursuant to this Article Sixth in good faith and on the basis of such information and assistance as was then reasonably available for such purpose shall be conclusive and binding upon the Corporation and its directors, officers and stockholders.

SEVENTH: (a) *Authority*. The governing body of the Corporation shall be the Board. The business and affairs of the Corporation shall be managed by or under the direction of the Board.

(b) *Number of Directors*. The Board shall consist of not less than 11 and not more than 23 directors, the exact number to be fixed in accordance with the Bylaws of the Corporation.

EIGHTH: No Person that is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) may be a director or officer of the Corporation.

NINTH: No Action by Written Consent. Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

TENTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any Person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Tenth, the Corporation 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.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a Person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Tenth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Tenth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Tenth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Tenth is in effect, and any repeal or modification of any applicable law or of this Article Tenth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Tenth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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.

(f) The rights conferred on any Covered Person by this Article Tenth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such Person.

(g) The Corporation'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 corporation, partnership, joint venture, trust, enterprise or non-profit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

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(h) Any repeal or modification of the foregoing provisions of this Article Tenth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Tenth), whether or not the Corporation would have the power to indemnify such Person against such expense, liability or loss under the GCL.

ELEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of the Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by such Certificate of Incorporation are granted subject to this reservation. For so long as this Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, before any amendment to or repeal of any provision of this Certificate of Incorporation shall be effective, such amendment or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary and if such amendment or repeal must be filed with or filed with and approved by the SEC, then such amendment or repeal shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

TWELFTH: The Bylaws of the Corporation may be altered, amended or repealed, and new Bylaws may be adopted at any time, by the Board. Stockholders of the Corporation may alter, amend or repeal any Bylaw; provided that, in addition to any other vote which may be required by law, the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders of the Corporation to adopt, alter, amend or repeal any provision of the Corporation's Bylaws. For so long as this Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, before any amendment to or repeal of any provision of the Corporation's Bylaws shall be effective, such amendment or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary and if such amendment or repeal must be filed with or filed with and approved by the SEC, then such amendment or repeal shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

THIRTEENTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

FOURTEENTH: The Corporation, its directors, officers, agents and employees, irrevocably submit to the jurisdiction of the U.S. federal courts, the SEC, and the Regulated Securities Exchange Subsidiaries, for the purposes of any suit, action or proceeding pursuant to U.S. federal securities laws or the rules or regulations thereunder, commenced or initiated by the SEC arising out of, or relating to, the Regulated Securities Exchange Subsidiaries' activities (and shall be deemed to agree that the Corporation may serve as the U.S. agent for purposes of service of process in such suit, action or proceeding), and hereby waive, and agree not to assert by way of motion, as a defense or otherwise in any such suit, action or proceeding, any claims that they are not personally subject to the jurisdiction of the U.S. federal courts, the SEC, and the Regulated Securities Exchange Subsidiaries, that the suit, action or proceeding is an inconvenient forum or that the venue of the suit, action or proceeding is improper, or that the subject matter thereof may not be enforced in or by such courts or agency.

FIFTEENTH: To the fullest extent permitted by applicable law, all confidential information pertaining to the self-regulatory function of Regulated Securities Exchange Subsidiaries (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of any Regulated Securities Exchange Subsidiary that shall come into the possession of the Corporation shall: (1) not be made available to any Persons (other than as provided in the next sentence) other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (2) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (3) not be used for any commercial purposes. Notwithstanding the foregoing sentence, nothing in this Certificate of Incorporation shall be interpreted so as to limit or impede the rights of the SEC or any Regulated Securities Exchange Subsidiary to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the SEC or any Regulated Securities Exchange Subsidiary to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the SEC or any Regulated Securities Exchange Subsidiary.

For so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, the books, records, premises, officers, directors and employees of the Corporation shall be deemed to be the books, records, premises, officers, directors and employees of the Regulated Securities Exchange Subsidiary for purposes of and subject to oversight pursuant to the Act, but only to the extent that such books, records, premises, officers, directors and employees of the Corporation relate to the business of such Regulated Securities Exchange Subsidiary. The books and records related to the business of a Regulated Securities Exchange Subsidiary shall be subject at all times to inspection and copying by the SEC and the Regulated Securities Exchange Subsidiary.

SIXTEENTH: (a) The Corporation shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the SEC, and each Regulated Securities Exchange Subsidiary pursuant to and to the extent of its regulatory authority, and shall take reasonable steps necessary to cause its agents to cooperate with the SEC and, where applicable, the Regulated Securities Exchange Subsidiaries pursuant to their regulatory authority, with respect to such agents' activities related to the Regulated Securities Exchange Subsidiaries. No stockholder, employee, former employee, beneficiary, customer, creditor, community or regulatory authority or member thereof shall have any rights against the Corporation or any director, officer or employee of the Corporation under this Section (a) of this Article Sixteenth.

(b) The Corporation shall take reasonable steps necessary to cause its directors, officers and employees, prior to accepting such a position with the Corporation, to consent in writing to the applicability to them of Article Fourteenth, Article Fifteenth and Sections (c) and (d) of this Article Sixteenth of this Certificate of Incorporation, as applicable, with respect to their activities related to any of the Regulated Securities Exchange Subsidiaries. In addition, the Corporation shall take

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reasonable steps necessary to cause its agents, prior to accepting such a position with the Corporation, to be subject to the provisions of Article Fourteenth, Article Fifteenth and Sections (c) and (d) of this Article Sixteenth of this Certificate of Incorporation, as applicable, with respect to their activities related to any of the Regulated Securities Exchange Subsidiaries.

(c) For so long as the Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, each officer, director and employee of the Corporation shall give due regard to the preservation of the independence of the self regulatory function of the Regulated Securities Exchange Subsidiaries and to each of the Regulated Securities Exchange Subsidiaries and to each of the Regulated Securities Exchange Subsidiaries obligations under the Act, and the rules thereunder including, without limitation, Section 6(b) of the Act and shall not take any actions which he or she knows or reasonably should have known would interfere with the effectuation of any decisions by the board of directors of any Regulated Securities Exchange Subsidiary relating to such Regulated Securities Exchange Subsidiary's regulatory functions (including disciplinary matters) or which would adversely affect the ability of the Regulated Securities Exchange Subsidiary to carry out such Regulated Securities Exchange Subsidiary's responsibilities under the Act.

(d) In discharging his or her responsibilities as a member of the Board, each director shall take into consideration the effect that the Corporation's actions would have on the ability of each Regulated Securities Exchange Subsidiary to carry out its responsibilities under the Act and on the ability of each Regulated Securities Exchange Subsidiary and the Corporation: to engage in conduct that fosters and does not interfere with each Regulated Securities Exchange Subsidiary's and the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with Persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the SEC, and each Regulated Securities Exchange Subsidiary pursuant to its regulatory authority.

SEVENTEENTH: Unless and except to the extent that the Bylaws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

IN WITNESS WHEREOF, CBOE Holdings, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

CBOE HOLDINGS, INC By: Name Edward T. Tilly

Its:

Chairman and Chief Executive Officer

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FOURTH AMENDED AND RESTATED

BYLAWS OF CBOE GLOBAL MARKETS, INC.

ARTICLE 1—OFFICES

1.1 Registered Offices. The registered office of Cboe Global Markets, Inc. (the "Corporation") in the State of Delaware shall be located at Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19805. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company. The registered office and/or registered agent of the Corporation may be changed from time to time by action of the Board of Directors of the Corporation (the "Board of Directors").

1.2 *Other Offices.* The Corporation may also have offices at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require.

1.3 *Books.* The books of the Corporation may be kept within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require, provided such books and records are kept within the United States.

ARTICLE 2—STOCKHOLDERS

2.1 *Place of Meetings.* All meetings of stockholders shall be held at such place, if any, within or without the State of Delaware as may be designated from time to time by the Board of Directors or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

2.2 Annual Meeting. The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on such date and at such time and at such place, if any, within or without the State of Delaware as shall be fixed by the Board of Directors, pursuant to a resolution adopted by the affirmative vote of a majority of the total number of directors then in office, or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) and stated in the notice of the meeting. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient. If no annual meeting is held in accordance with the foregoing may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these Bylaws to the annual meeting of stockholders shall be deemed to refer to such special meeting.

2.3 Special Meeting. Special meetings of stockholders may be called at any time by only the Chairman of the Board, the Chief Executive Officer, the President or the Board of Directors pursuant to a resolution adopted by the affirmative vote of a majority of the total number of directors then in office. Special meetings may not be called by any other person or persons. Any business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

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2.4 Notice of Meetings. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, notice of each meeting of stockholders, whether annual or special, shall be given in any manner permitted by law not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder as of the record date for determining the stockholders entitled to notice of the meeting. The notices of all meetings shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting). The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called.

The officer who has charge of the stock ledger shall prepare and make, at 2.5 Voting List. least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date), arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, at least ten (10) days prior to the meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of meeting or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list of stockholders must also be open to examination at the meeting as required by applicable law. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this Section 2.5 or to vote in person or by proxy at any meeting of stockholders.

2.6 Quorum. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the holders of a majority in voting power of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote at the meeting (after taking into account the effect of any reduction of the number of shares entitled to vote as a result of the voting limitations imposed by Article Sixth of the Corporation's Certificate of Incorporation, if any), present in person or represented by proxy, shall constitute a quorum for the transaction of business.

2.7 Adjournments. Any meeting of stockholders may be adjourned to any other time and to any other place at which a meeting of stockholders may be held under these Bylaws by the holders of a majority in voting power of the stockholders present or represented at the meeting and entitled to vote, although less than a quorum, or by any officer entitled to preside at or to act as secretary of such meeting. Notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. If the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board of Directors shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to each stockholder of record as of the record date so fixed for notice of such adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting.

2.8 *Voting.* Except as otherwise provided by the General Corporation Law of the State of Delaware ("DGCL"), the Certificate of Incorporation or these Bylaws, each stockholder shall have one vote for each share of capital stock entitled to vote and held of record by such stockholder.

Every stockholder may authorize another person or persons to 2.9 *Proxy Representation*. act for such stockholder by proxy in all matters in any manner permitted by law. No proxy shall be voted or acted upon after three years from its date unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. The authorization of a proxy may but need not be limited to specified action, provided, however, that if a proxy limits its authorization to a meeting or meetings of stockholders, unless otherwise specifically provided such proxy shall entitle the holder thereof to vote at any adjourned session but shall not be valid after the final adjournment thereof. A proxy purporting to be authorized by or on behalf of a stockholder, if accepted by the Corporation in its discretion, shall be deemed valid unless challenged at or prior to its exercise, and the burden of proving invalidity shall rest on the challenger. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by delivering to the Secretary of the Corporation a revocation of the proxy or a new proxy bearing a later date.

When a quorum is present at any meeting, (a) a majority of the 2.10 Action at Meeting. votes properly cast upon any question other than an election of directors shall decide the question, except when a different vote is required by the Certificate of Incorporation, these Bylaws, the rules or regulations of any stock exchange applicable to the Corporation, or any law or regulation applicable to the Corporation or its securities, and (b) each nominee for director shall be elected to the Board of Directors if a majority of the votes properly cast are in favor of such nominee's election (i.e., if the number of votes properly cast "for" a nominee's election exceeds the number of votes properly cast "against" that nominee's election (with "abstentions" and "broker nonvotes" not counted as a vote cast either "for" or "against" that director's election)); provided, however, that, if, as of the last date by which stockholders of the Corporation may submit notice to nominate a person for election as a director pursuant to Section 2.11 of these Bylaws or pursuant to any rule or regulation of the Securities and Exchange Commission, the number of nominees for director exceeds the number of directors to be elected at any such meeting (a "Contested Election"), a plurality of the votes properly cast for the election of directors shall be sufficient to elect directors. No ballot shall be required for any election unless requested by a stockholder present or represented at the meeting and entitled to vote in the election.

2.11 Nomination of Directors. Only persons who are nominated in accordance with the following procedures shall be eligible for election as directors. The nomination for election to the Board of Directors at an annual meeting of stockholders may be made only (A) pursuant to the Corporation's notice of meeting (or any supplement thereto), (B) by the Board of Directors, any committee thereof or (C) by any stockholder (i) who is a stockholder of record on the date of the notice given pursuant to this Section 2.11 and who is entitled to vote at the annual meeting and (ii) who complies with the notice procedures set forth in this Section 2.11. Such nominations, other than those made by or on behalf of the Board of Directors or any committee thereof, shall be made by notice in writing to the Secretary and received at the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to

the anniversary date of the immediately preceding annual meeting of stockholders; provided, however, that if the annual meeting is not held within thirty (30) days before or more than seventy (70) days after such anniversary date, then such nomination shall have been delivered to or mailed and received by the Secretary not later than the close of business on the 10th day following the date on which public announcement of the annual meeting date was made. In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above. Such notice shall set forth (a) as to each proposed nominee (i) the name, age, business address and residence address of such nominee, (ii) the principal occupation or employment of such nominee, (iii) the number of shares of stock of the Corporation which are owned beneficially and the number of shares of stock of the Corporation which are held of record by such nominee, and (iv) any other information concerning the nominee that must be disclosed as to nominees in proxy solicitations pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Act"), and the rules and regulations promulgated thereunder, including such person's written consent to be named in the proxy statement as a nominee and to serve as a director if elected; and (b) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is made (i) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner, (ii) the class and number of shares of capital stock of the Corporation which are owned beneficially and of record by such stockholder and such beneficial owner, (iii) a description of any agreement, arrangement or understanding with respect to the nomination between or among such stockholder and/or such beneficial owner, any of their respective affiliates or associates, and any others acting in concert with any of the foregoing, including any nominee, (iv) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the stockholder's notice by, or on behalf of, such stockholder and such beneficial owners, whether or not such instrument or right shall be subject to settlement in underlying shares of capital stock of the Corporation, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner, with respect to shares of capital stock of the Corporation, (v) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such nomination, (vi) a representation whether the stockholder or the beneficial owner, if any, intends or is part of a group which intends (a) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to elect the nominee and/or (b) otherwise to solicit proxies or votes from stockholders in support of such nomination, and (vii) any other information relating to such stockholder and beneficial owner, if any, required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in an election contest pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder. The Corporation may require any proposed nominee to furnish such other information as the Corporation may reasonably require to determine the eligibility of such proposed nominee to serve as a director of the Corporation.

The chairman of the meeting may, if the facts warrant, determine that a nomination was not made in accordance with the foregoing procedure, and, if he or she should so determine, he or she shall so declare to the meeting, and the defective nomination shall be disregarded.

Notice of Business at Annual Meetings. At an annual meeting of the stockholders, 2.12 only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (b) otherwise properly brought before the meeting by or at the direction of the Board of Directors (or any committee thereof), or (c) otherwise properly brought before an annual meeting by a stockholder (i) who is a stockholder of record on the date of the giving of notice provided for in this Section 2.12 and entitled to vote at such annual meeting, and (ii) who complies with the notice procedures set forth in this Section 2.12. For business to be properly brought before an annual meeting by a stockholder, if such business relates to the election of directors of the Corporation, the procedures in Section 2.11 must be complied with. If such business relates to any other matter, the stockholder must have given timely notice thereof in writing to the Secretary. To be timely, a stockholder's notice must be delivered to or mailed to the Secretary and received at the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to the anniversary date of the immediately preceding annual meeting of stockholders; provided, however, that if the annual meeting is not held within thirty (30) days before or seventy (70) days after such anniversary date, then for the notice by the stockholder to be timely it must be so received not later than the close of business on the 10th day following the date on which public announcement of the annual meeting date was made. In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above. To be in proper written form, a stockholder's notice to the Secretary shall set forth (a) as to any business (other than nominations for the election of directors) that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and, in the event that such business includes a proposal to amend the Bylaws of the Corporation, the language of the proposed amendment), the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (b) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is made (i) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner, (ii) the class and number of shares of capital stock of the Corporation which are owned beneficially and of record by such stockholder and such beneficial owner, (iii) a description of any agreement, arrangement or understanding with respect to the proposal between or among such stockholder and/or such beneficial owner, any of their respective affiliates or associates, and any others acting in concert with any of the foregoing, (iv) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the stockholder's notice by, or on behalf of, such stockholder and such beneficial owners, whether or not such instrument or right shall be subject to settlement in underlying shares of capital stock of the Corporation, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner, with respect to shares of

capital stock of the Corporation, (v) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business, and (vi) a representation whether the stockholder or the beneficial owner, if any, intends or is part of a group which intends (a) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to approve or adopt the proposal and/or (b) otherwise to solicit proxies or votes from stockholders in support of such proposal. Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in Section 2.11 or this Section 2.12, except that any stockholder proposal which complies with Rule 14a-8 of the proxy rules, or any successor provision, promulgated under the Act, and is to be included in the Corporation's proxy statement for an annual meeting of stockholders shall be deemed to comply with the requirements of this Section 2.12. Notwithstanding the foregoing provisions of this Section 2.12 or Section 2.11, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual or special meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination may be disregarded and such proposed business need not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Section 2.12 and Section 2.11, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of stockholders.

For purposes of Section 2.11 and Section 2.12, "public announcement" shall include disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Act. Notwithstanding the foregoing provisions in Section 2.11 or Section 2.12, a stockholder shall also comply with all applicable requirements of the Act and the rules and regulations thereunder with respect to the matters set forth in this Section 2.11 and Section 2.12. Nothing in either Section 2.11 or Section 2.12 shall be deemed to affect any rights (a) of stockholders to request inclusion of proposals or nominations in the Corporation's proxy statement pursuant to applicable rules and regulations promulgated under the Act or (b) of the holders of any series of Preferred Stock to elect directors pursuant to any applicable provisions of the Certificate of Incorporation.

The chairman of the meeting shall, if the facts warrant, determine that business was not properly brought before the meeting in accordance with the provisions of this *Section 2.12*, and, if he or she should so determine, the chairman shall so declare to the meeting, and any such business not properly brought before the meeting shall not be transacted.

2.13 *Action without Meeting*. Stockholders may not take any action by written consent in lieu of a meeting.

2.14 Organization. The Chairman of the Board, or in the Chairman of the Board's absence, the Chief Executive Officer or President, shall call meetings of the stockholders to order and act as chairman of such meeting; *provided*, *however*, that the Board of Directors may appoint any stockholder to act as chairman of any meeting in the absence of the Chairman of the Board. The

Secretary of the Corporation shall act as secretary at all meetings of the stockholders; *provided*, *however*, that in the absence of the Secretary at any meeting of the stockholders, the chairman of such meeting may appoint any person to act as secretary of the meeting.

2.15 Inspectors of Election. The Corporation may, and shall if required by law, in advance of any meeting of stockholders, appoint one or more inspectors of election, who may be employees of the Corporation, to act at the meeting or any adjournment thereof and to make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. In the event that no inspector so appointed or designated is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath to execute faithfully the duties of inspector with strict impartiality and according to the best of his or her ability. The inspector or inspectors so appointed or designated shall (i) ascertain the number of shares of capital stock of the Corporation outstanding and the voting power of each such share, (ii) determine the shares of capital stock of the Corporation represented at the meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares of capital stock of the Corporation represented at the meeting and such inspectors' count of all votes and ballots. Such certification and report shall specify such other information as may be required by law. In determining the validity and counting of proxies and ballots cast at any meeting of stockholders of the Corporation, the inspectors may consider such information as is permitted by applicable law. No person who is a candidate for an office at an election may serve as an inspector at such election.

The date and time of the opening and the closing of the polls for 2.16 Conduct of Meetings. each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the person presiding over any meeting of stockholders shall have the right and authority to convene and to adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the presiding person of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board of Directors or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

ARTICLE 3—DIRECTORS

3.1 *General Powers*. The business and affairs of the Corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the Corporation except as otherwise provided by law, the Certificate of Incorporation or these Bylaws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

3.2 *Number; Election; Qualification and Term of Office.* The Board of Directors of the Corporation shall consist of not less than 11 and not more than 23 directors, the exact number to be fixed by the Board of Directors from time to time pursuant to resolution adopted by the Board.

Directors shall be elected annually and shall hold office until the next annual meeting and until such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation or removal.

3.3 *Independent Directors.* At all times no less than two-thirds of the members of the Board of Directors shall satisfy the independence requirements adopted by the Board of Directors for directors of the Corporation, as may be modified and amended by the Board of Directors from time to time, and which shall satisfy the independence requirements contained in the listing standards of either the New York Stock Exchange or The NASDAQ Stock Market.

3.4 *Resignations.* A director may resign at any time by giving written or electronic notice of his resignation to the Chairman of the Board or the Secretary, and such resignation will be effective when delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events.

3.5 *Vacancies.* Any vacancy in the Board of Directors, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his successor and to his earlier death, resignation or removal.

3.6 *Chairman of the Board.* The Board of Directors shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in *Section 3.7* hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board of Directors and stockholders and shall exercise such other powers and perform such other duties as are delegated to the Chairman of the Board by the Board of Directors.

3.7 *Lead Director.* The Board of Directors may appoint one of the independent directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board of Directors may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the non-management directors and at meetings of the independent directors of the Board of Directors.

3.8 Acting Chairman and Vacancy in Chairman of the Board Position. (a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman,

shall be presiding officer at all meetings of the Board of Directors and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board of Directors. The Acting Chairman of the Board may be, but need not be, the same person as the Lead Director.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

3.9 *Regular Meetings.* Regular meetings of the Board of Directors shall be held at such time and at such place as shall be determined by the Chairman of the Board with notice of such determination provided to the full the Board of Directors.

3.10 Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board or the Chief Executive Officer and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, either in person, by mail, messenger, overnight courier, facsimile machine, electronic mail or telephone. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

3.11 *Participation in Meetings.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the Board of Directors or any members of any committee of the Board of Directors designated by the directors may participate in a meeting of the Board of Directors or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Participation by such means shall constitute presence in person at such meeting.

3.12 Action at Meeting. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, at each meeting of the Board of Directors, a whole number of directors equal to at least a majority of the total number of directors constituting the entire Board of Directors shall constitute a quorum for the transaction of business. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, at any meeting of the Board of Directors at which a quorum is present, the vote of a majority of the directors present shall be sufficient to take any action, unless a different vote is specified by law, the Certificate of Incorporation or these Bylaws.

3.13 Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee of the Board of Directors may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the writing or writings or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee of the Board of Directors, as applicable.

3.14 *Compensation of Directors.* The directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the Corporation or any of its parent or subsidiary corporations in any other capacity and receiving compensation for such service.

ARTICLE 4—COMMITTEES

4.1 *Designation of Committees.* The committees of the Board of Directors shall consist of an Executive Committee, an Audit Committee, a Compensation Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board of Directors. The Corporation shall have such other committees as may be provided in these Bylaws or as may be from time to time appointed by the Board of Directors. The Board of Directors shall designate the members of these other committees and may designate a Chairman and a Vice-Chairman thereof.

4.2 The Executive Committee. The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, and such other number of directors that the Board of Directors deems appropriate, provided that at all times the majority of the directors serving on the Executive Committee must be independent directors. Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. Members of the Executive Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The Executive Committee shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board of Directors to (i) approve or adopt or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including, without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any Bylaw of the Corporation.

4.3 *The Audit Committee.* The Audit Committee shall consist of at least three directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Audit Committee members shall be determined from time to time by the Board of Directors. Members of the Audit Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Audit Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Audit Committee for approval by the Board of Directors. The Audit Committee for approval by the Board of Directors. The Audit Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors and the Audit Committee Charter as adopted by resolution of the Board of Directors.

4.4 *The Compensation Committee.* The Compensation Committee shall consist of at least three directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Compensation Committee members shall be determined from time to time by the Board of Directors. Members of the Compensation Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Compensation Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Chairman of the Compensation Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Compensation Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors.

4.5 *The Nominating and Governance Committee.* The Nominating and Governance Committee shall consist of at least five directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board of Directors. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Nominating and Governance Committee for approval by the Board of Directors. The Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Nominating and Governance Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors.

4.6 *Other*. All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Board of Directors.

4.7 *Conduct of Proceedings.* Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board of Directors and appropriate committees of the Board of Directors to the extent requested by the Board of Directors or Board committee.

ARTICLE 5—OFFICERS

5.1 *Number and Election.* The officers of the Corporation shall be a Chief Executive Officer, a Chief Financial Officer, a President, one or more Vice-Presidents (the number thereof to be determined by the Board of Directors), a Secretary, a Treasurer, and such other officers as the Board of Directors may determine, including an Assistant Secretary or Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board of Directors, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office.

Two or more offices may be held by the same person, except the Chief Executive Officer may not also be the Secretary or Assistant Secretary and the President may not also be the Secretary or Assistant Secretary.

5.2 *Chief Executive Officer.* The Chief Executive Officer shall, subject to the direction of the Board of Directors, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board of Directors may from time to time prescribe and that are incident to the office of Chief Executive Officer. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board of Directors, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

5.3 *President.* The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of

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the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

5.4 *Chief Financial Officer*. The Chief Financial Officer shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the corporate funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board of Directors; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board of Directors, at its regular meeting or when the Board of Directors so requires, an account of the Corporation.

5.5 *Vice Presidents.* Vice Presidents shall perform the duties prescribed by the Board of Directors, the Chief Executive Officer or President.

5.6 Secretary. The Secretary shall attend all meetings of stockholders and of the Board of Directors; the Secretary shall keep official records of meetings of stockholders at which action is taken and of meetings of the Board of Directors; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of special meetings of the Board of Directors in accordance with the provisions of these Bylaws or as required by statute; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board of Directors, the Chief Executive Officer or President.

5.7 *Treasurer*. The Treasurer shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

5.8 *Qualification and Tenure.* No officer need be a stockholder of the Corporation. Except as otherwise provided by law, by the Certificate of Incorporation or by these Bylaws, each officer shall hold office until his successor is elected and qualified, unless a different term is specified in the vote choosing or appointing him or her, or until his earlier death, resignation or removal.

5.9 *Resignation*. Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

5.10 *Removals.* Any officer appointed by the Board of Directors may be removed at any time by the Board of Directors, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board of Directors. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed.

5.11 *Vacancies.* The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices

other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board of Directors to appoint a person to hold such office. Each such successor, however appointed, shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

5.12 *Salaries.* Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors unless otherwise delegated to the Compensation Committee of the Board of Directors or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE 6—CAPITAL STOCK

6.1 *Issuance of Stock.* Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the Corporation or the whole or any part of any unissued balance of the authorized capital stock of the Corporation held in its treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such consideration and on such terms as the Board of Directors may determine.

6.2 *Certificates of Stock.* (a) The shares of stock in the Corporation shall be represented by certificates; provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to any such shares represented by a certificate theretofore issued until such certificate is surrendered to the Corporation. If shares of stock in the Corporation are certificated, any signature on such certificates may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

(b) Certificates representing shares of stock of the Corporation may bear such legends regarding restrictions on transfer or other matters as any officer or officers of the Corporation may determine to be appropriate and lawful. If the Corporation is authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate, if such shares are represented by certificates, which the Corporation shall issue to represent such class or series of stock, provided that, except as otherwise required by law, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series of stock and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated shares of any class or series of stock, the Corporation shall send to the registered owner thereof a written notice containing the information required by law to be set forth or stated on certificates representing shares of such class or series or a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated shares and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 Transfers. The shares of stock of the Corporation represented by certificates shall be transferable only upon the Corporation's books by the holders thereof in person or by their duly authorized attorneys or legal representatives, and upon such transfer the old certificates shall be surrendered to the Corporation by the delivery thereof to the person in charge of the stock and transfer books and ledgers, or to such other person as the Board of Directors may designate, by whom they shall be cancelled, and new certificates or uncertificated shares shall thereupon be issued. A record shall be made of each transfer and whenever a transfer shall be made for collateral security, and not absolutely, it shall be so expressed in the entry of the transfer. Uncertificated shares of stock of the Corporation shall be transferable only upon the Corporation's books by the holders thereof in person or by their duly authorized attorneys and legal representatives upon receipt by the Corporation or its transfer agent of proper transfer instructions from the registered owner of such uncertificated shares or such holder's duly authorized attorneys and legal representatives, and upon receipt of proper transfer instructions such uncertificated shares shall be canceled, new uncertificated shares or certificates representing shares shall be issued to the person entitled thereto and the transaction shall be recorded upon the books of the Corporation.

6.4 Lost, Stolen or Destroyed Certificates. The Corporation may issue a new certificate, certificates or uncertificated shares of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Corporation may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity as the Corporation may require for the protection of the Corporation or any transfer agent or registrar.

6.5 Fixing Date for Determination of Stockholders of Record. (a) In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board of Directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board of Directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for determining stockholders entitled to vote at such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice of the meeting is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders

entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which shall not be more than sixty (60) days prior to such other action. If no such record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

6.6 *Dividends*. Subject to limitations contained in the DGCL, the Certificate of Incorporation and these Bylaws, the Board of Directors may declare and pay dividends upon the shares of capital stock of the Corporation, which dividends may be paid either in cash, in property or in shares of the capital stock of the Corporation.

ARTICLE 7—RESERVED

ARTICLE 8----NOTICES

8.1 *Notices.* Except as provided in *Section 8.2* and to the extent permitted by law, any notice required to be given by these Bylaws or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary. In the event that a notice is not provided in conformity with the provisions of this *Section 8.1*, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

8.2 *Electronic Notice.* Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

8.3 *Waiver of Notice.* Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, or otherwise, a waiver thereof, given by the person entitled to notice, or his proxy in the case of a stockholder, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the person entitled to notice shall be deemed a waiver duly given. Attendance of a person at a meeting, including attendance by proxy in the case of a stockholder, shall constitute a waiver of notice of such meeting except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any waiver of notice.

ARTICLE 9—GENERAL PROVISIONS

9.1 *Fiscal Year.* Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

9.2 *Corporate Seal.* The corporate seal, if any, shall be in such form as shall be approved by the Board of Directors or an officer of the Corporation.

9.3 Voting of Securities. Except as the Board of Directors may otherwise designate, the Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders or equity owners of any other corporation, organization or entity, the securities of which may be held by the Corporation.

9.4 *Evidence of Authority.* A certificate by the Secretary, or Assistant Secretary, as to any action taken by the stockholders, Board of Directors, a committee or any officer or representative of the Corporation shall, as to all persons who rely on the certificate in good faith, be conclusive evidence of such action.

9.5 *Certificate of Incorporation.* All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

9.6 Transactions with Interested Parties. No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director, manager or officer is present at or participates in the meeting of the Board of Directors or a committee of the Board of Directors which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(1) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative

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votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(2) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(3) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee of the Board of Directors or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee at which the contract or transaction is authorized.

9.7 *Severability.* Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

9.8 *Pronouns*. All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

9.9 *Contracts.* In addition to the powers otherwise granted to officers pursuant to Article 5 hereof, the Board of Directors may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

9.10 Loans. The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may be with or without interest, and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the Corporation. Nothing in this *Section 9.10* shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

9.11 *Records.* The Certificate of Incorporation, Bylaws and the proceedings of all meetings of the stockholders, the Board of Directors, the Executive Committee and any other committee of the Board of Directors shall be recorded in appropriate minute books provided for this purpose or in any other information storage device (whether in paper or electronic form), provided that the records so kept can be converted into clearly legible form within a reasonable time. The Corporation shall so convert any such records so kept upon the request of any person entitled to inspect the same.

9.12 *Section Headings*. Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

9.13 *Inconsistent Provisions*. In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the DGCL or any other

applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE 10—AMENDMENTS

10.1 *Amendment*. These Bylaws may be amended, altered or repealed, and new Bylaws may be adopted at any time, by the Board of Directors. Stockholders of the Corporation may alter, amend or repeal any Bylaw; provided, that in addition to any vote of the holders of any class or series of stock of the Corporation required by law or the Certificate of Incorporation, the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders to adopt, alter, amend or repeal any provision of these Bylaws.

10.2 Submission to Boards of any Regulated Securities Exchange Subsidiary. Notwithstanding Section 10.1, for so long as the Corporation shall control, directly or indirectly, any national securities exchange (a "Regulated Securities Exchange Subsidiary"), before any amendment, alteration or repeal of any provision of these Bylaws shall be effective, such amendment, alteration or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary, and if such amendment, alteration or repeal must be filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, as the case may be.

ARTICLE 11—FORUM FOR ADJUDICATION OF DISPUTES

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer, other employee or stockholder of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, or (iv) any action asserting a claim governed by the internal affairs doctrine.

W Cboe C2 Exchange, Inc.

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "C2 OPTIONS EXCHANGE, INCORPORATED", CHANGING ITS NAME FROM "C2 OPTIONS EXCHANGE, INCORPORATED" TO "CBOE C2 EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:07 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4648009 8100 SR# 20176643027

You may verify this certificate online at corp.delaware.gov/authver.shtml

Jeffrey W. Bullock, S cretary of State

Authentication: 203408783 Date: 10-17-17

State of Delaware Secretary of State Division of Corporations Delivered 10:07 PM 10/16/2017 FILED 10:07 PM 10/16/2017 SR 20176643027 - File Number 4648009

FIFTH AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION of C2 OPTIONS EXCHANGE, INCORPORATED

C2 Options Exchange, Incorporated, a corporation organized under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

- 1. The Corporation was incorporated on July 21, 2009.
- 2. This Fifth Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Section 242 and Section 245 of the General Corporation Law of the State of Delaware (the "GCL") and by the written consent of its sole stockholder in accordance with Section 228 of the GCL. This Fifth Amended and Restated Certificate of Incorporation restates, integrates and further amends the provisions of the Fourth Amended and Restated Certificate of Incorporation.
- 3. The text of the Fifth Amended and Restated Certificate of Incorporation as amended and restated shall read in full as follows:

FIRST: The name of the corporation is Cboe C2 Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Trading Permit Holders and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Trading Permit Holders" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the GCL.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Cboe Global Markets, Inc. ("Cboe") will be the sole owner of the Common Stock. Any sale, transfer or assignment by Cboe of any shares of Common Stock will

be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "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 director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, 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 attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation 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 Directors of the Corporation.

(b) Expenses (including 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 Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation 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 Corporation 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 Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, 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 Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth 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.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was

the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, 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 Directors.

(f) The rights conferred on any Covered Person by this Article Sixth 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 director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation'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 corporation, 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 corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth 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.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, C2 Options Exchange, Incorporated has caused this certificate to be signed as of this 16th day of October, 2017.

C2 OPTIONS EXCHANGE, INCORPORATED

Bv: Name: Edward T. Tilly

Its: Chief Executive Officer

NINTH AMENDED AND RESTATED BYLAWS OF CBOE C2 EXCHANGE, INC. ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

(a) The term "Act" means the Securities Exchange Act of 1934, as amended.

(b) The term "affiliate" of a Person or "affiliated with" another Person shall have the meaning given to such term in the Rules of the Exchange.

(c) The term "Board" means the Board of Directors of the Corporation.

(d) The term "Corporation" means Cboe C2 Exchange, Inc.

(e) The term "Exchange" means the Corporation, its exchange market and any facilities thereof.

(f) The term "Trading Permit Holder" means any individual, corporation, partnership, limited liability company or other entity authorized by the Rules that holds a Trading Permit. If a Trading Permit Holder is an individual, the Trading Permit Holder may also be referred to as an "individual Trading Permit Holder." If a Trading Permit Holder is not an individual, the Trading Permit Holder may also be referred to as a "TPH organization." A Trading Permit Holder is a "member" solely for purposes of the Act; however, one's status as a Trading Permit Holder does not confer on that Person any ownership interest in the Exchange.

(g) The term "Person" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.

(h) The term "Rules" means the rules of the Exchange as adopted or amended from time to time.

(i) The term "Trading Permit" shall have the meaning given to such term in the Rules of the Exchange.

(j) The term "associated with an entity" means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.

••• *

(k) The term "Representative Director Nominating Body" shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, than the "Representative Director Nominating Body" shall mean the Trading Permit Holders Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one

upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is a holder of a Trading Permit or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for holders of Trading Permits to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Holders of Trading Permits may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the total outstanding Trading Permits at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Trading Permit Holders identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Trading Permit Holders identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each holder of a Trading Permit shall have one vote with respect to each Trading Permit held by such Trading Permit Holder for each Representative Director position to be filled that year; provided,

however, that no holder of Trading Permits, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by a holder of Trading Permits, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, Trading Permits representing one-third of the total outstanding Trading Permits entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Trading Permit Holders setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Trading Permit Holders to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Trading Permit Holders and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disgualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the

Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommended individuals to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board's fiduciary duties. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum.

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other 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.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight and Compliance Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such other committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall

not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight and Compliance Committee.

The Regulatory Oversight and Compliance Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight and Compliance Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight and Compliance Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight and Compliance Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight and Compliance Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight and Compliance Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when

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so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Trading Permit Holders at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Trading Permit Holders and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board will establish an Advisory Board which shall advise the Board and management regarding matters of interest to Trading Permit Holders. It shall consist of such number of members as set by the Board from time to time, including at least two members who are Trading Permit Holders or persons associated with Trading Permit Holders. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be a Trading Permit Holders Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Trading Permit Holders or persons associated with Trading Permit Holders, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

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(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

CBOE Futures Exchange, LLC

Х

Y CBOE Stock Exchange, LLC

Z Cboe Building Corporation



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION", CHANGING ITS NAME FROM "CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION" TO "CBOE BUILDING CORPORATION", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:24 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



897245 8100 SR# 20176652047

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203410899 Date: 10-17-17

State of Delaware Secretary of State Division of Corporations Delivered 12:24 PM 10/17/2017 FILED 12:24 PM 10/17/2017 SR 20176652047 - File Number 897245

AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION

OF

CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on August 8, 1980. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe Building Corporation.

SECOND: The address of the registered office of the corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the registered agent of the corporation at this address is The Corporation Trust Company.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of stock that the corporation is authorized to issue is one (1) share of common stock, having a par value of one dollar (\$1).

FIFTH: The business and affairs of the corporation shall be managed by the board of directors, who need not be elected by ballot unless required by the by-laws of the corporation.

SIXTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the directors are expressly authorized to adopt, amend or repeal the by-laws.

SEVENTH: The corporation reserves the right to amend and repeal any provision contained in this Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware. All rights conferred are granted subject to this reservation.

[Signature page follows]

IN WITNESS WHEREOF, Chicago Options Exchange Building Corporation has caused this certificate to be signed as of this 17th day of October, 2017.

CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION

7 By:

Name: Chris Concannon Its: President

AA CBOE, LLC

BB CBOE III, LLC

CC Cboe Bats, LLC

DD CBOE Livevol, LLC



The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CBOE V, LLC", CHANGING ITS NAME FROM "CBOE V, LLC" TO "CBOE BATS, LLC", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:59 O`CLOCK P.M.



6152929 8100 SR# 20176643033

You may verify this certificate online at corp.delaware.gov/authver.shtml

Joffrey W. Bullock, Secretary of State

Authentication: 203408829 Date: 10-17-17

Page 1

State of Delaware Secretary of State Division of Corporations Delivered 09:59 PM 10/16/2017 FILED 09:59 PM 10/16/2017 SR 20176643033 - File Number 6152929

AMENDED AND RESTATED

CERTIFICATE OF FORMATION

OF

CBOE V, LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on September 23, 2016 under the name CBOE V, LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation, has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the limited liability company is Cboe Bats, LLC.

2. The address of the registered office of the limited liability company in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

3. The limited liability company shall provide indemnification for members of its board of directors (the "Board of Directors"), members of committees of the Board of Directors and of other committees of the limited liability company, and its officers, and the limited liability company may provide indemnification for its agents and employees, and those serving another corporation, partnership, joint venture, trust or other enterprise at the request of the limited liability company, in each case to the maximum extent permitted by the Delaware Limited Liability Company Act (6 Del. C. §18-101 et seq.) (the "LLC Act"); provided, however, that the limited liability company may provide indemnify and further, that the limited liability company shall not be required to indemnify any person in connection with any proceeding (or part thereof) initiated by such person or any proceeding by such person against the limited liability company or its directors, officers, employees or other agents unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors or (iii) such indemnification is provided by the limited liability company under the LLC Act.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of CBOE V, LLC to be executed as of this 16th day of October, 2017.

CBOE V, LLC

By: Name: Edward T. Tilly Title: Chief Executive Officer EE Cboe UK Limited

FF CBOE Vest, LLC

GG Loan Markets, LLC

HH Cboe Data Services, LLC

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "MARKET DATA EXPRESS, LLC", CHANGING ITS NAME FROM "MARKET DATA EXPRESS, LLC" TO "CBOE DATA SERVICES, LLC", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:26 O`CLOCK P.M.



4113001 8100 SR# 20176652050

You may verify this certificate online at corp.delaware.gov/authver.shtml

Jeffrey W. Bullock, Secretary of State

Authentication: 203410924 Date: 10-17-17

State of Delaware Secretary of State Division of Corporations Delivered 12:26 PM 10/17/2017 FILED 12:26 PM 10/17/2017 SR 20176652050 - File Number 4113001

AMENDED AND RESTATED

CERTIFICATE OF FORMATION

OF

MARKET DATA EXPRESS, LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on February 21, 2006 under the name Market Data Express, LLC. This Amended and Restated Certificate of Formation of the LLC, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation, has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the limited liability company is Cboe Data Services, LLC.

- 2. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.
- 3. This Certificate of Formation shall be effective upon the date of filing.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Market Data Express, LLC to be executed as of this 16th day of October, 2017.

MARKET DATA EXPRESS, LLC

By:

Name: Edward T. Tilly Title: Chief Executive Officer

II Signal Trading Systems, LLC

JJ

KK Vest Financial Group, Inc.

LL Cboe Hong Kong Limited



2540000 編號 No.

公司註冊處 COMPANIES REGISTRY

公司更改名稱證明書 CERTIFICATE OF CHANGE OF NAME

ate ate ate

本人 謹 此 證 明 I hereby certify that

CBOE Hong Kong Limited

已藉特別決議更改其名稱, 該公司根據 having by special resolution changed its name, is now incorporated under the

香港法例第622章《公司條例》註册的名稱現為 Companies Ordinance (Chapter 622 of the Laws of Hong Kong) in the name of

Cboe Hong Kong Limited

本證明書於 二〇一七 年 十 月 十七 日發出。 Issued on 17 October 2017.

4.P.L

香港特別行政區公司註冊處處長鍾麗玲 Ms Ada L L CHUNG

Registrar of Companies Hong Kong Special Administrative Region

註 Note:

公司名稱獲公司註冊處註冊,並不表示獲授予該公司名稱或其任何部分的商標權或任何 其他知識產權。

Registration of a company name with the Companies Registry does not confer any trade mark rights or any other intellectual property rights in respect of the company name or any part thereof.

<u>Exhibit F</u>

Exhibit Request:

A complete set of all forms pertaining to:

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

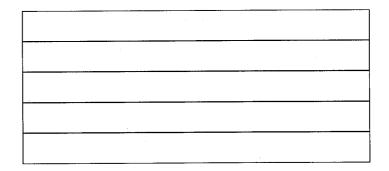
Response:

Attached please find the following documents which have recently been added or updated:

- 1. Trading Permit & Bandwidth Packet Additions/Removals
- 2. Trading Permit Holder (TPH) Organization Application
- 3. Financial Questionnaire
- 4. Application for a Trading Permit Holder (TPH) Organization to Qualify to Transact Business with the Public
- 5. Application for a TPH Organization to Qualify to Conduct Business as an Order Service Firm
- 6. Order Service Firm Letter of Guarantee
- 7. Clearing Trading Permit Holder Connectivity Guarantee for Login Access
- 8. Nominee/TPH Organization Acronym/Login Activation/Termination
- 9. Individual Consent to Jurisdiction
- 10. Accredited Investor Disclosure Form for Israeli Participants
- 11. Czech Republic Trading Permit Holder Supplemental Application Form
- 12. Mauritius Trading Permit Holder Supplemental Application Form
- 13. Korean Trading Permit Holder Supplemental Application Form
- 14. Taiwanese Trading Permit Holder Supplemental Application Form
- 15. ETH Trading Permit & Bandwidth Packet Additions/ Removals
- 16. ETH Acronym/ Login Activation/ Termination
- 17. Organization Consent to Jurisdiction
- 18. Individual Application
- 19. Nominee Authorization, Guarantee and Certification
- 20. Market-Maker Letter of Guarantee/Floor Broker Letter of Clearing Authorization
- 21. Flexible Exchange (FLEX) Options Trader Application for Qualified Market-Maker, Floor Broker or Order Entry Firm
- 22. Application of Nominee to Act as an Independent Market-Maker or Independent Floor Broker
- 23. Sponsored User Program Materials
- 24. On Floor DPM Appointment Application
- 25. On Floor LMM Appointment Application
- 26. Off Floor DPM Appointment Application

Cboe Options Exchange Trading Permit & Bandwidth Packet Additions/Removals

TRADING PERMIT HOLDER ORGANIZATION NAME AUTHORIZED REPRESENTATIVE'S NAME AUTHORIZED REPRESENTATIVE'S TITLE SIGNATURE OF AUTHORIZED REPRESENTATIVE EFFECTIVE DATE



MARKET-MAKER TRADING PERMITS SPX TIER APPOINTMENT* FLOOR BROKER TRADING PERMITS ELECTRONIC ACCESS PERMITS QUOTING & ORDER ENTRY BANDWIDTH PACKETS ORDER ENTRY BANDWIDTH PACKETS

ADDING	

REMOVING	
	ł

DEMOVING

Please fill out the above information, indicating the action to be taken for the number of trading permits and/or bandwidth packets listed. E-mail the completed form as an attachment to <u>tradingpermits@cboe.com</u>. Cboe Exchange personnel will contact you regarding your request.

Trading permits and bandwidth packets will auto renew for the following month unless the Trading Permit Holder requests to have them removed. Requests to **remove trading permits** must be received by **4:00 pm on the second-to-last business day** of the prior month to cancel the Trading Permit effective at or prior to the end of the applicable month. Requests to **remove bandwidth packets** must be made by the **last day of the month** to be effective for the following month.

*Please note that if you are adding or removing an SPX Tier Appointment you must also log onto MAP for the change to become effective.

REGISTRATION SERVICES DEPARTMENT USE ONLY					
Representative is authorized to act on behalf of the TPH:	Specialists Initials:	Date:			

Trading Permit Number/s

Registration Services Department Signature & Date Updated October 18, 2017

Cboe Options Exchange Trading Permit Holder (TPH) Organization Application

The appropriate fees and paperwork must accompany this application. All Application Fees are Non-Refundable

1.	Name:		Tax ID #:
	□ Corporation	Partnership	Limited Liability Company (LLC)
	State of registration		
	(Current articles of incorporat certificate must be submitted		eement and registration certificate, or LLC operating agreement and registration
2.	E-mail Address:		Phone:
3.	Mailing Address:		
	City:	State/Provinc	ce:Zip/Mail Code:
4.	Cboe Options Clearing Tra	ding Permit Holder issuing t	he guarantee for the organization's activity on Cboe Options:
	Name:		OCC #:
5.	Capacity in which you inte	nd to act as a TPH organizat	ion (check at least one):
			ry Trading Permit Holder 🛛 🗆 Clearing Trading Permit Holder
	Transact Business wit	h the Public 🛛 🗆 *Order Se	ervice Firm * Application to qualify as such must be attached
6.	Is the organization regist	ered with the SEC. under Sec	tion 15 of the Securities Exchange Act of 1934, as a broker/dealer
0.		Registration Depository (CRI	
	If yes, give the organization	on's BD # 8,	CRD # and Designated Examining Authority (DEA)
			. If no, the organization must complete Form BD
	and submit one copy wit	h this application.	
		Organization Consen	t to Jurisdiction & Certifications
Th	e organization hereby agrees to a	bide by the Bylaws and Rules of the	Cboe Exchange, Inc. (Cboe Options) as they shall be in effect from time to time.
to	furnish to Cboe Options, upon it	s request, any information they ma	ities exchange, national securities association, commodities exchange or other entity ay have concerning the organization, and the organization hereby releases each such shing such information to Cboe Options.
er	tity (upon such entity's showing	of proper authority and need) any	governmental agency, national securities exchange, commodities exchange or other r information the CBOE may have concerning the organization, and the organizatior lature by reason of furnishing such information
Tł as	ne organization certifies that all ssociated with a person subject to	associated persons required to b a statutory disqualification, unless	e fingerprinted have been fingerprinted and the organization affirms that it is not any such individual's association is otherwise appropriately approved by an SRO.
Tł af	ne organization agrees to promptl ter the date of submission of its a	y update its application materials il oplication to Cboe Options and pric	any of the information provided in these materials becomes inaccurate or incomplete or to any approval of the application.
Tł de	ne organization recognizes that t eclares that they are true, complet	the statements in the application the and accurate.	materials furnished to Cboe Options may be verified by investigation, and hereby
TI	ne organization agrees to be subje	ct to the jurisdiction of the U.S. fed	eral courts and Illinois state courts.
N	ame of Authorized Signator	y of the Organization:	
S	ignature of Authorized Sign	atory of the Organization:	· .

. ------

Title: _____

Updated October 16, 2017

Cboe Options Exchange Financial Questionnaire

1. Debts To Exchanges Or Exchange Participants (verbal and written)

Do you owe any monies to Cboe Exchange, Inc national futures association, or a commodities assessments, fines, or other amounts)?	exchange that are overdue (including, b	ut not limited to, any overdue fee	es association, a es, charges, dues, No □
To Whom	· · ·	\$\$,
Have satisfactory arrangements been made to r	epay this debt?	Yes 🗖	No 🗖
Describe	,	\$	
Do you owe any monies to any Trading Permit Ho exchange/association, national futures associat To Whom	tion, or a commodities exchange?	Yes 🗖	No 🗖
Have satisfactory arrangements been made to r	repay this debt?	Yes 🗖	No 🗖
Describe		\$	

II. Financing Arrangements

Cboe Options Rule 8.10 governs the financing of market makers by non-broker-dealers. Each market maker who makes an arrangement with a non-broker-dealer to finance the market maker's transactions as a market maker is required by Rule 8.10 to identify to the Cboe Regulatory Division: (i) the sources(s) of any such financing; (ii) the terms of any such financing; and (iii) the termination of, or any changes to, any such financing arrangement. The form to report any such financing arrangements is available from the Cboe Regulatory Division (312-786-8141).

If you are a market maker or are applying to be approved as a market maker:

Have you received any financing from, or made any financing arrangements with, any non-broker-dealer to finance your to	ansactions as a
marketmaker?Yes	No 🗖

Describe

If the answer to the foregoing question is "yes", have you filed with the Cboe Regulatory Division a completed form to report	t this financing
along with a copy of the loan agreement?Yes 🗖	No 🗖

Securities and Exchange Commission (SEC) Rule15c3-1d governs the financing of a Cboe Options Trading Permit Holder broker-dealer by another broker-dealer. Any Cboe Options broker-dealer that borrows funds from another broker-dealer that are to be used for trading or other business purposes is required by SEC Rule 15c3-1d to do so pursuant to a subordinated loan agreement that has been filed with and approved by the Cboe Regulatory Division. Subordinated Loan Agreement forms are available from the Cboe Regulatory Division (312-786-8141).

If you are a broker-dealer:

Have you bo	prrowed fun	ds from	any broker-deale	r that are to be	e used fo	or trading o	r other business purposes?Yes□	No 🗖
Describe								
					•			e e e constala

(Applicants operating as Broker-Dealers must provide a current financial statement or focus report)

I hereby state that I have read and understand the contents of this financial statement and attest that such statement represents a true reflection of my financial condition as of the date of this submission. Please note that it may be considered a violation of Exchange Rule 4.6 for an applicant for any type of Trading Permit to make a misstatement on any documents submitted to the Cboe Options.

Name	Title	
Signature	Date	

Cboe Options Exchange Application for a Trading Permit Holder (TPH) Organization to Qualify to Transact Business with the Public

			• <i>4</i>
Name of TPH (Organization		
			for vorvived even lementary decumentation
Applying as:	□ Firm conducting		e for required supplementary documentation.) eived directly from non-broker dealers ntation.)
Broker/Dealer	#: 8	CRD#:	
Main Office Ad	ldress		
City		State	Zip Code
	□ Corporation	Limited Liability Company	□ Partnership
State the nam options and w	ne and title of the perso who must therefore qual	n(s) engaged in the management o ify with the Exchange as Registered	f the organization's business pertaining to Options Principals:
Financial and	Operations Principal (F	NOP): Name	
Phone #	<u>. рад. "Алан</u>	Fax #	CRD #
Title		E-Mail	
Name of Orga	nization's Certified Pub	lic Accountant	
Address			
			Zip Code
		statements herein (and in every su declares that they are true, complet	pplementary sheet attached hereto) will be e and accurate.
Name of Auth	orized Signatory of TP⊦	I Organization	
(Signature of	Authorized Signatory of	TPH Organization)	
Title			Date

Please submit the following information to Cboe Regulatory Services

For introducing firms and/or clearing trading permit holders:

- 1. List of registered options principals and registered representatives qualified for options trading.
- 2. List of branch office locations and branch office managers.
- 3. A copy of the method utilized for the allocation of exercise notices as sent to customers (if not included in the customer options agreement).
- 4. Blank copies of:

Customer information form Option agreement Discretionary trading authorization New account form Fully-disclosed and/or omnibus trading agreements Transaction confirmation and account statement Special Risk Disclosure Document for Uncovered Options

- 5. Copy of firm's options written supervisory procedures
- 6. A copy of the most recent net capital computation
- 7. Balance sheet
- 8. Income statement
- 9. A copy of the most recent audit report (if applicable).
- 10. Description of its Brokers' Blanket Bond arrangement

Indicate other exchange memberships currently held ____

For firms only conducting an execution business of orders received directly from non-broker/dealers:

- 1. List of registered options principals and registered representatives qualified for options trading.
- 2. Copy of execution/clearing agreement with customer and clearing TPH that customer account clears with.
- 3. Copy of firm's options written supervisory and order entry procedures.
- 4. A copy of the most recent net capital computation
- 5. Balance sheet
- 6. Income statement
- 7. A copy of the most recent audit report (if applicable).
- 8. Description of its Brokers' Blanket Bond arrangement.

Indicate other exchange memberships currently held ____

Applicat	-	ganization to Qualify	
Name of TPH Organization			
Broker/Dealer #: 8		CRD#:	
Main Office Address			
City	State	Zi	p Code
□ Corporation	🗆 Limited L	Liability Company	□ Partnership
Name the executive officer, LLC mastatement.	anager or general pa	artner who is/will be res	ponsible for preparation of the financial
Name		Title	
Phone	Fax	E-Mail	
Name the executive officer, LLC mar	nager or general partr	ner who is/will be respon	sible for risk and/or error control.
Name		Title	
Phone	Fax	E-Mail	
List the firm(s) and contact person(s	s) with which the TPH	Organization maintains	its error account(s).
Firm		Contact Pers	on
Phone	Fax	E-Mail	
Firm		Contact Pers	on
Phone	Fax	E-Mail	
If applicable, list the clearing corpo pending participant.	oration(s) and/or dep	pository (ies) in which th	ne TPH Organization is either a current or
Clearing Corporation		Dep	pository
Clearing Corporation	·	Dep	pository
The undersigned recognizes that th by investigation, and hereby declar			tary sheet attached hereto) will be verified
Name of Authorized Signatory of TF	PH Organization		
(Signature of Authorized Signatory			
Title			Date

Cboe Options Exchange

Please submit the following information to Cboe Regulatory Services

- 1. A copy of the most recent net capital computation (if applicable)
- 2. Balance sheet
- 3. Income statement
- 4. A copy of the most recent audit report (if applicable)
- 5. Description of its Brokers' Blanket Bond arrangement (if applicable)
- 6. Indicate other exchanges on which a membership is currently held or an application for membership is currently

pending or anticipated ______

- 7. A description of how and where stock orders or futures orders are routed for execution
- 8. A description of the mechanisms in place to prevent errors
- 9. A copy of the written procedures for liquidation of errors
- 10. Copies of the most recent monthly error account and proprietary account statements

Cboe Options Exchange Order Service Firm Letter of Guarantee

This agreement is made between	(Order Service Firm)
and	(Clearing Trading Permit Holder) as of (date).
Cboe Options for the purpose of taking order	ization of the Cboe Exchange, Inc. (Cboe Options) and is registered with s for the purchase and sale of securities or commodity futures contracts rading Permit Holders on the floor of the Cboe Options; and
WHEREAS, Clearing Trading Permit Holder is	a clearing member of The Options Clearing Corporation,
NOW, THEREFORE, in consideration of the p own benefit and for the benefit of the Exchar	remises and agreements hereinafter set forth, the parties agree for their ge and its Trading Permit Holders as follows:
1. Clearing Trading Permit Holder ac Firm on the floor of Cboe Options ar	ccepts financial responsibility for all orders handled by the Order Service d for all financial obligations of the Order Service Firm to the Exchange.
the Registration Services Departm Department at least one hour prior shall not become effective until the Permit Holder that files the written	I force and effect until a written notice of revocation has been filed with ent. If such written notice is not filed with the Registration Services to the opening of trading on a particular trading day, such revocation close of trading on such day. Upon the request of the Clearing Trading notice of revocation, the Exchange shall post notice of the revocation. I not relieve Clearing Trading Permit Holder of responsibility for the ective day of such revocation.
Name of Authorized Signatory of Order Servi	ce Firm
(Signature of Authorized Signatory of Order	Service Firm)
Title	Date
Name of Authorized Signatory of Clearing Tr	ading Permit Holder
(Signature of Authorized Signatory of Cleari	ng Trading Permit Holder)
Title	Date

Updated October 18, 2017

Cboe Options Exchange Clearing Trading Permit Holder Connectivity Guarantee for Login Access

Name of Clearing Trading Permit Holder

OCC #

Name of Trading Permit Holder

In accordance with Cboe Options Exchange (Cboe Options) Rule 3.28, Clearing Trading Permit Holder advises Cboe Options that it guarantees and assumes financial responsibility for all transactions on Cboe Options resulting from orders, bids, offers, and other messages that are transmitted through any login access to Cboe Options provided to the above-listed Trading Permit Holder. The Clearing Trading Permit Holder guarantees and assumes financial responsibility for such transactions on Cboe Options even if orders, bids, offers, or other messages transmitted to Cboe Options through the foregoing login access (i) were entered as a result of a failure in applicable security and/or credit controls, (ii) were entered by an unknown or unauthorized user, or (iii) exceeded Clearing Trading Permit Holder's credit parameters.

Name of Authorized Signatory of Clearing Trading Permit Holder

Signature of Authorized Signatory of Clearing Trading Permit Holder

Date

Title

Cboe Options Exchange Nominee / TPH Organization Acronym / Login Activation / Termination

s of, please terminate,	CTIVATION					
tective for	of, please make				,	
TPH Organization Name A Market Maker Permit I Floor Broker Permit I Electronic Access Permit I Not tied to a Trading Permit I TPH Organization listed above will become effective ERMINATION Stof, please terminate Date Nominee (if applicable) Acronym/Logi TPH Organization Name TPH Organization listed above will terminate ESPONSIBLE PERSON (if applicable) OINT ACCOUNT (if applicable) I Add to joint account(s): I Terminate from joint account(s): I Terminate from joint account(s): I Terminate from joint account(s): I Terminate Signatory of TPH Organization I Terminate I I I I I I I I I I I I I I I I I I I		• • •				Acronym/Login
a Market Maker Permit Floor Broker Permit Electronic Access Permit a Not tied to a Trading Permit TPH Organization listed above will become effective BRMINATION sof	lective for		,			
Not tied to a Trading Permit TPH Organization listed above will become effective	n a 🛛 🗆 Market Maker Permit				🗆 Electro	onic Access Permi
ERMINATION sof, please terminate,,	· · · · · · · · · · · · · · · · · · ·			isted ab		
sof, please terminate,,, Acronym/Logi r						
Date Nominee (if applicable) Acronym/Logi r TPH Organization Name TPH Organization Name TPH Organization listed above will terminate ESPONSIBLE PERSON (if applicable)	ERMINATION					
Date Nominee (if applicable) Acronym/Logi r TPH Organization Name TPH Organization listed above will terminate ESPONSIBLE PERSON (if applicable) esponsible Person Name OINT ACCOUNT (if applicable) Image: Add to joint account(s): Image: Add to joint account(s):	ofplease terminate					
TPH Organization Name TPH Organization listed above will terminate ESPONSIBLE PERSON (if applicable) esponsible Person Name OINT ACCOUNT (if applicable) Add to joint account(s): Terminate from joint account(s): I ame of Authorized Signatory of TPH Organization						Acronym/Login
TPH Organization listed above will terminate ESPONSIBLE PERSON (if applicable) esponsible Person Name OINT ACCOUNT (if applicable) I Add to joint account(s): I Terminate from joint account(s):	r					
ESPONSIBLE PERSON (if applicable) esponsible Person Name OINT ACCOUNT (if applicable) I Add to joint account(s): I Terminate from joint account(s): I Terminate from joint account(s): ame of Authorized Signatory of TPH Organization		TPH Organizatio	on Name			
Acronym/Logir OINT ACCOUNT (if applicable) Add to joint account(s): Terminate from joint account(s): ame of Authorized Signatory of TPH Organization Title	TPH Organization listed above will terminate	!				
esponsible Person Name Acronym/Logir OINT ACCOUNT (if applicable) Add to joint account(s):///////						
Acronym/Login	ESPONSIBLE PERSON (if applicable)					
OINT ACCOUNT (if applicable) Add to joint account(s): Terminate from joint account(s): ame of Authorized Signatory of TPH Organization Title						
Add to joint account(s): ////////	esponsible Person Name				•	Acronym/Login
Add to joint account(s): ////////	OINT ACCOUNT (if applicable)					
Terminate from joint account(s):		1		1	1	/
ame of Authorized Signatory of TPH Organization Title		//				
		/				
ignature of Authorized Signatory Date	ame of Authorized Signatory of TPH Organization		Title			
ignature of Authorized Signatory Date						
ignature of Authorized Signatory Date	· ·					
			Date			
	ignature of Authorized Signatory					
REGISTRATION SERVICES DEPARTMENT USE ONLY		SERVICES DEPAR	TMENT U	JSE ONL	Ŷ	
REGISTRATION SERVICES DEPARTMENT USE ONLY		SERVICES DEPAR	TMENT U	JSE ONL'	Y	

Cboe Options Exchange Individual Consent to Jurisdiction

I hereby agree to abide by the Bylaws and Rules of the Cboe Exchange, Inc. (Cboe Options) as they shall be in effect from time to time.

I authorize any governmental agency, national securities exchange, national securities association, commodities exchange and all of my former employers and other persons to furnish to Cboe Options, upon its request, any information they may have concerning my character, ability, business activities, reputation and employment history and I hereby release each such person from any and all liability of whatsoever nature by reason of furnishing such information to Cboe Options.

I authorize Cboe Options to make available to any governmental agency, national securities exchange, national securities association, commodities exchange or other entity (upon such entity's showing of proper authority and need) any information Cboe Options may have concerning me, and I hereby release Cboe Options from any and all liability of whatsoever nature by reason of furnishing such information.

I agree to promptly update my application materials if any of the information provided in these materials becomes inaccurate or incomplete after the date of submission of my application to Cboe Options and prior to any approval of the application.

I acknowledge and agree that under the Fair Credit Reporting Act Cboe Options may procure or cause to be prepared an investigative consumer report on me, including, without limitation, information as to my character, general reputation, personal characteristics, employment, clearing firm, finances, financial litigation, mode of living, and credit reports, as applicable. The Federal Trade Commission's "Summary of Your Rights under the Fair Credit Reporting Act" is available at: <u>https://www.consumer.ftc.gov/articles/pdf-0096-fair-credit-reporting-act.pdf</u>

I recognize that the statements in the application materials furnished to Cboe Options may be verified by investigation, and hereby declare that they are true, complete and accurate.

Printed Name _____

Signature _____ Date _____

Name of Organization ______

Note: Each associated person of a TPH organization that is required to be disclosed on Exchange Act Form BD as a direct owner or executive officer is required to complete this form.

Updated October 17, 2017

Cboe Options Exchange Accredited Investor Disclosure Form for Israeli Participants Accredited Investor Confirmation – Corporations and Individuals

To: Cboe Exchange, Inc. ("Cboe Options")

I/we confirm that I/we am/are an "Accredited Investors" as defined in the First Schedule to the Securities Law Israeli Securities Law, 1968, and confirm that I/we am/are eligible for such classification by virtue of the fact that I/we satisfy one of the applicable requirements set out below:

(Please check the relevant criteria)

- □ We are authorized mutual fund (joint investment trust fund) as defined in the Joint Investment Trust Law, 5754-1994 or a company managing such fund.
- We are a provident fund as defined in the Regulation of Financial Services (Provident Funds) Law 5765-2005, or a company that manages such provident funds.
- U We are an insurer as defined in the Supervision of Insurance Business Law, 5741-1981.
- We are a banking corporation or an auxiliary corporation, as defined in the Banking (Licensing) Law, 5741-1981 - with the exception of joint services companies - purchasing [securities] on their own behalf or on behalf of investor clients who fall within the categories listed in section 15A(b) in the Law.
- We/I are/am license holder/s or a portfolio manager/investment adviser under the Regulation of Investment Advising, Investment Marketing and Investment Portfolio Management Law, 5755-1995, who are purchasing securities for their own account.
- □ We are a member of the Tel Aviv Stock Exchange.
- □ We are an underwriter qualified in accordance with Section 56(c) of the Securities Law.
- We are a venture capital fund, for these purposes a "venture capital fund" means a corporation primarily engaged in investments in other corporations which are engaged, at the time of the investment, in research and development or in the production of innovative or high technology products or processes, and where the risk of such investment is typically higher than the risk involved in other investments.
- □ We are a corporation (including a fund, partnership) other than a corporation which was incorporated for the purpose of purchasing securities in a specific offer, with equity exceeding 50 million NIS; in this paragraph, the term "equity" includes the definition

given to that term by foreign accounting rules, international accounting standards, and accepted accounting principles in the United States.

- □ I am an individual who satisfies **two** of the following conditions (please check the relevant criteria):
 - □ The aggregate value of cash, deposits, financial assets and securities owned by me exceeds NIS 12 million;
 - □ I have expertise and capability in the field of capital markets or was employed for at least one year in a professional position which required such expertise;
 - □ I have executed on average 30 transactions in securities or financial assets in each of the four quarters prior to the date of this letter, not including transactions performed on my behalf by a portfolio manager under a portfolio management agreement.
- □ We are a corporation which is wholly owned by one of the aforementioned investors (mark the relevant criteria of the specified above).
- □ We are a corporation incorporated outside of Israel whose activity has characteristics similar to one of the aforementioned corporations (mark the relevant criteria of the specified above).

I/we confirm that I/we am/are aware of the implications of being treated as an eligible client and consent to be treated as such.

Trading Permit Holder Name:		
Signature of Authorized Representative:	· · ·	
Authorized Representative Name:		
Authorized Representative Title:		
Date:		

Updated October 18, 2017

Cboe Options Exchange Czech Republic Trading Permit Holder Supplemental Application Form

The business organization referenced below ("Organization") certifies the following to Cboe Exchange, Inc. ("Cboe Options"):

The Organization has obtained explicit consent from its customers regarding the transfer of their personal data to the United States of America to Cboe Options and has fulfilled all the obligations under applicable personal data protection laws. In particular, the Organization has obtained the permission of Czech Office for Personal Data Protection to transfer the personal data to a third country (i.e., the United States of America).

If the Organization acts as a third party and sends orders to the Exchange on behalf of customers, the Organization is authorized to provide investment services under the laws of the Czech Republic.

Name of Organization:	·····	
Signature of Authorized Signatory:		·
Name of Authorized Signatory:		
Title of Authorized Signatory:		
Date:		

Cboe Options Exchange Mauritius Trading Permit Holder Supplemental Application Form

The business organization referenced below ("Organization") certifies the following:

The Organization is authorized to become a Trading Permit Holder of Cboe Exchange, Inc. ("Cboe Options") and to engage in trading activities on Cboe Options market.

Please attach a copy of the Organization's business license for operating in Mauritius.

Name of Organization:	
Signature of Authorized Signatory:	
Name of Authorized Signatory:	
Title of Authorized Signatory:	
Date:	

Cboe Options Exchange Korean Trading Permit Holder Supplemental Application Form

The business organization referenced below ("Organization") certifies the following to Cboe Exchange, Inc. ("Cboe Options"):

The Organization is a Financial Investment Company ("FIC") as defined under Korean law and satisfies the applicable requirements for designation as an FIC.

Name of Organization:	
Signature of Authorized Signatory:	
Name of Authorized Signatory:	 ,
Title of Authorized Signatory:	
Date:	

Cboe Options Exchange Taiwanese Trading Permit Holder Supplemental Application Form

The business organization referenced below ("Organization") certifies the following to Cboe Exchange, Inc. ("Cboe Options"):

The Organization is either a Futures Commission Merchant ("FCM") or a registered broker-dealer as defined under Taiwanese law and satisfies the applicable requirements for designation as either an FCM or registered broker-dealer.

The Organization will comply with the Taiwan Personal Data Protection Act ("PDPA") and will provide notification to and obtain the consent from individual customers to ensure that: (i) the individual customers' personal data may be provided to Cboe Options; and (ii) the use by and provision of personal data to Cboe Options is within the scope of the customers' consent or notice to the customer, as applicable.

Under Cboe Options Rule 3.4A, each individual Trading Permit Holder ("TPH") must be domiciled in or each TPH organization must be organized under the laws of a jurisdiction expressly approved by Cboe Options, and will be subject to the jurisdiction of the federal courts of the United States and the courts of Illinois. Additionally, approval of a Taiwanese TPH is contingent upon the condition that the TPH does not trade in any Cboe Options product other than the Cboe Options products that have been expressly authorized for trading in Taiwan. Any violation of this condition will be considered a violation of Cboe Options' rules. The Organization certifies to Cboe Options that it will only enter orders and execute transactions on Cboe Options in Cboe Options products approved for trading in Taiwan and not in any other Cboe Options products. A list of Cboe Options products that are approved for trading in Taiwan is attached.

Name of Organization:	 <u></u>	
Signature of Authorized Signatory:	 	
Name of Authorized Signatory:		
Title of Authorized Signatory:	 	
Date		

Updated October 18, 2017

Cboe Options Exchange Extended Trading Hours (ETH) Trading Permit & Bandwidth Packet Additions/Removals

 TRADING PERMIT HOLDER ORGANIZATION NAME

 AUTHORIZED REPRESENTATIVE'S NAME

 AUTHORIZED REPRESENTATIVE'S TITLE

 SIGNATURE OF AUTHORIZED REPRESENTATIVE

 EFFECTIVE DATE

	ADDING	REMOVING
MARKET-MAKER TRADING PERMITS		
SPX TIER APPOINTMENT		
VIX APPOINTMENT		
ELECTRONIC ACCESS PERMITS		
QUOTING & ORDER ENTRY BANDWIDTH PACKETS		
ORDER ENTRY BANDWIDTH PACKETS		

Please fill out the above information, indicating the action to be taken for the number of ETH trading permits and/or bandwidth packets listed. E-mail the completed form as an attachment to <u>tradingpermits@cboe.com</u>. Cboe Exchange personnel will contact you regarding your request.

Trading permits and bandwidth packets will auto renew for the following month unless the Trading Permit Holder requests to have them removed. Requests to **remove ETH trading permits** must be received by **4:00 pm on the second-to-last business day** of the prior month to cancel the ETH Trading Permit effective at or prior to the end of the applicable month. Requests to **remove bandwidth packets** must be made by the **last day of the month** to be effective for the following month.

REGISTRATION SERVICES DEPARTMENT USE ONLY
--

Representative is authorized to act on behalf of the TPH:

Specialists Initials: _____ Date: _____

ETH Trading Permit Number/s

Registration Services Department Signature & Date

Updated October 18, 2017

Cboe Options Exchange Extended Trading Hours (ETH) Acronym / Login Activation / Termination

	, please make					
Date			ETH Acr	onym /Login		
ffective for	· · · · · · · · · · · · · · · · · · ·					
	TPH Organiz	ation Nam	ie			
on a 🛛 🗆 ETH Market Maker Permit			i Electroni	c Access Perr	nit	
ERMINATION						
As of close of business	please termi	inate				
Date	, predice contra			ETH Acrony	m /Login	
for						
	TPH Organiz	zation Nan	ne			
JOINT ACCOUNT (if applicable)						
□ Add to joint account(s):		1	1	1	/	
		_/	/	/		
Terminate from joint account(s):				/		
Terminate from joint account(s):						<u></u>
□ Terminate from joint account(s):						
		/				
Name of Authorized Signatory of TPH Organi	zation	/ Title				
Name of Authorized Signatory of TPH Organi	zation	/				
Name of Authorized Signatory of TPH Organi	zation	/ Title				
Name of Authorized Signatory of TPH Organi Signature of Authorized Signatory	zation	/ Title Date	/	/		
Name of Authorized Signatory of TPH Organi Signature of Authorized Signatory	zation	/ Title Date	/	/		
Name of Authorized Signatory of TPH Organi Signature of Authorized Signatory	zation	/ Title Date	/	/		

Cboe Options Exchange Organization Consent to Jurisdiction

The undersigned organization hereby agrees to abide by the Bylaws and Rules of the Cboe Exchange, Inc. (Cboe Options) as they shall be in effect from time to time.

The undersigned organization authorizes any governmental agency, national securities exchange, national securities association, commodities exchange or other entity to furnish to Cboe Options, upon its request, any information they may have concerning the organization, and the organization hereby releases each such entity from any and all liability of whatsoever nature by reason of furnishing such information to Cboe Options.

The undersigned organization authorizes Cboe Options to make available to any governmental agency, national securities exchange, commodities exchange or other entity (upon such entity's showing of proper authority and need) any information Cboe Options may have concerning the organization, and the organization hereby releases Cboe Options from any and all liability of whatsoever nature by reason of furnishing such information.

The undersigned organization agrees to promptly update its application materials if any of the information provided in these materials becomes inaccurate or incomplete after the date of submission of its application to Cboe Options and prior to any approval of the application.

The undersigned organization recognizes that the statements in the application materials furnished to Cboe Options may be verified by investigation, and hereby declares that they are true, complete and accurate.

Name of Organization _____

Name of Authorized Signatory of the Organization _____

(Signature of Authorized Signatory of the Organization)

Title_____Date _____

Cboe Options Exchange Individual Application

	paperwork must accompany this ition Fees are Non-Refundable.	s application.
1. Name	Social Se	curity #
2. Are you legally authorized to work in the Uniter (Please provide a copy of documentation evidencing your a expired U.S. passport, or copies of a driver's license along wit listed on Form I-9, Employment Eligibility Verification, provid	uthorization to work in the United States. th either a U.S. Social Security Card or a U.S	This may include a copy of an unexpired or . birth certificate, or other eligible documents
3. Business E-mail Address		
4. Business Address	···	
CityState/Province	Zip/Mail Code	Country
5. Home Address		
CityState/Province	Zip/Mail Code	Country
6. Telephone: Business	Home	Mobile
7. Please forward all correspondence to my:	E-mail Address	Business Address
8. Type of application:	□ Individual (Sole Proprietor)	🗆 Nominee
9. If applicable, name of TPH organization for wh	nich you will be a Nominee:	
10: Capacity in which you intend to act as a Trad	ing Permit Holder:	
🗆 Market Maker	🗌 Floor Broker	
Proprietary Trading Permit Holder	🗆 No Trading Functio	n
11. Cboe Options Clearing Trading Permit Holde or Connectivity Guarantee for Login Access:		arantee, Floor Broker Authorization
Name:		OCC #
12. Are you currently, or have you ever been, the legal proceedings whether or not they are purposes of this question, the term "legal proceeding, but not be limited to, if you are to have been the subject of a proceeding initial you are or have been the subject of a crimic you were charged with, convicted of, or please of the subject of a subject of a crimic proceeding in the subject of a crimic you were charged with, convicted of, or please of the subject of a subjec	e or were related to your activitie proceeding" is intended to be cons or have been a party in a lawsuit o ated by a government agency or a inal proceeding (including, but no	es in the securities industry. For the trued broadly and would be deemed r arbitration proceeding, if you are or s a result of a customer complaint, if t limited to, any proceeding in which

- 13. Are you currently, or have you ever been, the subject of an investigation conducted by, or on behalf of, any securities exchange, self-regulatory organization ("SRO") under the Securities Exchange Act of 1934, any futures contract market, exchange or self-regulatory organization (hereinafter collectively referred to as "securities or futures SRO"), or any federal or state securities or futures regulatory agency or commission regarding your activities? _____ If yes, describe ______
- 14. Are you currently, or have you been, a party in a disciplinary proceeding conducted by, or on behalf of, any securities or futures SRO, or any federal or state securities or futures regulatory agency or commission regarding your activity? _____ If yes, describe ______
- 15. Have you ever been sanctioned by any securities or futures SRO or any federal or state securities or futures regulatory agency or commission, including, but not limited to the following? _____ If yes, please check the appropriate box and describe ______

Censure	🗆 Fine

□ Suspension

🗆 Bar

16. Are you a member of any national securities exchange, national securities association, or commodities exchange?

Consent to Jurisdiction

I hereby agree to abide by the Bylaws and Rules of the Cboe Options Exchange (Cboe Options) as they shall be in effect from time to time.

I authorize any governmental agency, national securities exchange, national securities association, commodities exchange and all my former employers and other persons to furnish to Cboe Options, upon its request, any information they may have concerning my character, ability, business activities, reputation and employment history, and I hereby release each such person from any and all liability of whatsoever nature by reason of furnishing such information to Cboe Options.

I authorize Cboe Options to make available to any governmental agency, national securities exchange, national securities association, commodities exchange or other entity (upon such entity's showing of proper authority and need) any information it may have concerning me, and I hereby release Cboe Options from any and all liability of whatsoever nature by reason of furnishing such information.

I agree to promptly update my application materials if any of the information provided in these materials becomes inaccurate or incomplete after the date of submission of my application to Cboe Options and prior to any approval of the application.

I acknowledge and agree that under the Fair Credit Reporting Act Cboe Options may procure or cause to be prepared an investigative consumer report on me, including, without limitation, information as to my character, general reputation, personal characteristics, employment, clearing firm, finances, financial litigation, mode of living, and credit reports, as applicable. The Federal Trade Commission's "Summary of Your Rights under the Fair Credit Reporting Act" is available at https://www.consumer.ftc.gov/articles/pdf-0096-fair-credit-reporting-act.pdf

I agree to be subject to the jurisdiction of the U.S. federal courts and Illinois state courts.

I recognize that the statements in the application materials I furnish to Cboe Options may be verified by investigation, and hereby declare that they are true, complete and accurate.

Signature of Applicant _____ Date ____

Date _____

Updated October 17, 2017

Cboe Options Exchange Nominee Authorization, Guarantee and Certification

Name of Individual

Acronym

Name of TPH Organization

Description of the Functions and Responsibilities to Be Performed by Individual for TPH Organization:

Approximate Average Number of Hours Per Week During Which Individual Will Be Performing Functions and Responsibilities for TPH Organization ______

Pursuant to Cboe Options Rule 3.8 (b), TPH organization (i) authorizes Individual to represent TPH organization with respect to all matters relating to the Exchange; (ii) agrees to be responsible for all obligations arising out of Individual's representation of TPH organization in all matters relating to the Exchange; and (iii) agrees to guarantee payment of all monetary disciplinary sanctions assessed against Individual with respect to activity that takes place while Individual is a Nominee of a TPH organization.

Cboe Options Rule 3.8 (c)(i) provides that every nominee of a TPH organization must be materially involved in the daily operation of the Exchange business activities of the TPH organization for which the person is a nominee.

TPH organization hereby certifies to the Exchange that Individual will be materially involved in the daily operation of the Exchange business activities of the above-referenced TPH organization.

In the event that Individual acts as an independent Market-Maker and/or an independent Floor Broker pursuant to Cboe Options Rule 3.8(d), TPH organization agrees pursuant to Cboe Options Rule 3.8(d)(B) to guarantee all obligations arising out of Individual's activities as an independent Market-Maker and/or an independent Floor Broker.

TPH organization acknowledges that the TPH organization's responsibility for obligations arising out of Individual's activities as provided in the above paragraphs shall include responsibility for all obligations to the Exchange and all obligations to other Exchange Trading Permit Holders resulting from Exchange transactions or transactions in other securities made by Individual.

This authorization, guarantee and certification shall only apply with respect to time periods during which Individual is effective in the status of a Nominee of the TPH organization.

Name of Authorized Signatory of TPH Organization

(Signature of Authorized Signatory of TPH Organization)

Title

Date

Cboe Options Exchange Market-Maker Letter of Guarantee/ Floor Broker Letter of Clearing Authorization

Name of Individual Trading Permit Holder (if applicable):

Name of TPH Organization

Acronym

Market-Maker Letter of Guarantee

□ Market-Maker □ LMM □ DPM

In connection with the qualification of the above named Trading Permit Holder/TPH organization as a Market-Maker/LMM/DPM on the Exchange and pursuant to Cboe Options Rule 3.28, the undersigned Clearing Trading Permit Holder hereby guarantees and accepts financial responsibility for all transactions on the Exchange made by, or resulting from any orders, bids, offers, and other messages from the above named Trading Permit Holder/TPH organization when acting as a Market-Maker/LMM/DPM on the Exchange.

Floor Broker Letter of Clearing Authorization

In connection with the qualification of the above named Trading Permit Holder as a Floor Broker on the Exchange and pursuant to Cboe Options Rule 6.72, the undersigned Clearing Trading Permit Holder accepts financial responsibility for all Exchange transactions made by the above named Trading Permit Holder.

Clearing Trading Permit Holder	
	OCC #
Clearing Trading Permit Holder Representative (print)	
Clearing Trading Permit Holder Representative (signature)	
Clearing Trading Permit Holder Representative Title	Date

Updated October 17, 2017

Cboe Options Exchange Flexible Exchange (FLEX) Options Trader Application For Qualified Market-Maker, Floor Broker or Order Entry Firm

The undersigned following capac		Permit Holder hereby applies to become eligible to trade FLEX Opt	ions in the
	Individual FLEX Qualified Market-Maker	FLEX Qualified Market-Maker Organization	
	🖵 Individual Floor Broker	Order Entry Firm	
Trading Permit I	Holder wishes to trade the following FLEX Option	s:	
	FLEX Index Options and/or		
	FLEX Equity Options		
	d Trading Permit Holder has read and understan Cboe Exchange, Inc. Rules as they apply to FLEX	nds the rules, regulations and financial obligations as stated in Ch Options.	apters XXIVA
Individual Tradi	ng Permit Holders (if applicable):		
Individual Tradi	ng Permit Holder Name (including Nominees)	Acronym	<u> </u>
		Date	
(Individual Trad	ing Permit Holder Signature)		
Trading Permit	Holder Organizations (if applicable):		
TPH Organizatio	on Name	Acronym	
		Login ID	
Name of Author	ized Signatory of TPH Organization	· · · · · · · · · · · · · · · · · · ·	
(Signature of Au	ithorized Signatory of TPH Organization)		
Title		Date	

Letter of Guarantee Authorization

In connection with the FLEX Option qualification of the above named Trading Permit Holder(s), the undersigned Clearing Trading Permit Holder guarantees and assumes financial responsibility for (i) all FLEX Options transactions in open outcry on Cboe Options of the above named Trading Permit Holder(s) and (ii) all FLEX Options transactions on Cboe Options resulting from orders, bids, offers, and other messages that are transmitted through any login access to Cboe Options provided to the above named Trading Permit Holder(s). The Clearing Trading Permit Holder guarantees and assumes financial responsibility for such transactions on Cboe Options even if orders, bids, offers or other messages transmitted to Cboe Options through any login access to Cboe Options provided to the above named Trading Permit Holder(s) (i) were entered as a result of a failure in applicable security and/or credit controls, (ii) were entered by an unknown or unauthorized user, or (iii) exceeded Clearing Trading Permit Holder's credit parameters.

Clearing Trading Permit Holder	OCC #:	
Clearing Trading Permit Holder Representative (print)		
Clearing Trading Permit Holder Representative (Signature)	· · · · · · · · · · · · · · · · · · ·	<u> </u>
Clearing Trading Permit Holder Representative Title	Date	

Cboe Options Exchange Application of Nominee to Act as an Independent Market-Maker or Independent Floor Broker

Name of Individual:	Acronym:
Broker-Dealer No: 8	
Manner in which individual requests approval to act p	ursuant to Rule 3.8(d):
 Independent Market-Maker Independent Floor Broker 	
	olved in or doing business on behalf of another trading his form)? If yes, please provide the name of the
Signature of Individual:	Date:
Name of TPH Organization:	
	nization. Subject to the approval of the Exchange, trading dual to act in the manner as requested above during any holder organization.
representation of trading permit holder organization includes all obligations of Individual to the Exchang	ition to guarantee all obligations arising out of Individual's in all matters relating to the Exchange. This guarantee ge and to other trading permit holders or trading permit actions or transactions in other securities, including such Maker or as an Independent Floor Broker.
Name of Authorized Signatory of TPH Organization: _	
Signature of Authorized Signatory of TPH Organization	on:
Title:	Date:

Application Process

Filing Requirements

Prior to submitting a Sponsored User Agreement, the Sponsoring Trading Permit Holder must be a Trading Permit Holder in good standing of the Cboe Options Exchange (the "Exchange").

Checklist

The Sponsoring Trading Permit Holder and the Sponsored User must complete and submit all applicable materials noted in the checklist below, along with any applicable fees to:

Cboe Options Exchange Attn: Registration Services Department 400 S. LaSalle Street. 6th Floor Chicago, IL 60605 E-mail: <u>registration@cboe.com</u>

Note: All materials sent to the Exchange will be reviewed by its Registration Services and Regulatory Services Division for completeness and adequacy. If you have questions on completing the materials, you may direct them to the Registration Services Department (RSD) (<u>registration@cboe.com</u> or 312-786-7449) concerning the Sponsored User Agreement and Letter of Authorization or to the Regulatory Services Division (312-786-7069) concerning the Sponsoring Trading Permit Holder's Written Supervisory Procedures and Sponsored User's List of Authorized Traders.

Process

- Following submission of the materials noted in the checklist below and relevant fees, the materials will be reviewed for completeness and adequacy.
- Once it has been determined that the materials noted in the checklist below are complete and adequate, RSD
 will inform the Sponsoring Trading Permit Holder and the Sponsored User of the Exchange's acceptance of
 the Sponsored User registration status.
- The Sponsoring Trading Permit Holder and the Sponsored User are required to consult with the Exchange's Application Program Interface ("API") Group (api@cboe.com or 312-786-7300) to coordinate connectivity between the Sponsored User and the Exchange.
- Once connectivity is established, a representative of the Exchange API Group will inform the Sponsoring Trading Permit Holder of the Sponsored User's ability to have electronic access to the Exchange System(s).

Documentation Checklist

- □ Signed Sponsored User Agreement for (as applicable):
 - □ Cboe Options (Attachment A-1; an interactive form is available at <u>https://www.cboe.org/members/generalinfo/MemberFormArchive/SponsoredUser200806.pdf</u>)
 - □ CFLEX Options (Attachment A-1 and Attachment A-2; an interactive form is available at <u>http://www.cboe.com/institutional/SPONSOR.pdf</u>)
- □ Sponsoring Trading Permit Holder's Written Supervisory Procedures Related to the Sponsored User Program
- □ Sponsoring Trading Permit Holder's Written Supervisory Procedures related to SEC Rule 15c3-5 (the "Market Access Rule") that will be used in relation to the Sponsored User Program
- □ Sponsored User's List of Authorized Traders (Attachment B)
- □ Registration Fee -\$2,500

ATTACHMENT A Sponsored User Agreement

Complete and sign only the applicable agreement(s) seeking Sponsored User access to:

□ Cboe Options (Attachment A-1)

□ CFLEX Options (Attachments A-1 and A-2)

This Sponsored User Agreement ("Agreement") is to be entered into and maintained by Sponsoring Trading Permit Holder and Sponsored User with the Exchange, each as identified below, in order for Sponsored User to obtain and maintain authorized electronic access to the facilities and products in Cboe Options Rule 6.20A (see Cboe Options Rule 6.20A for definitions and requirements).

Sponsoring Trading Permit Holder acknowledges and agrees that:

(A) all orders entered by Sponsored User, any person acting on behalf of Sponsored User (e.g., employees or agents of Sponsored User), or any person acting in the name of Sponsored User (e.g., customers of Sponsored User) and any executions occurring as a result of such orders are binding in all respects on Sponsoring Trading Permit Holder;

(B) Sponsoring Trading Permit Holder is responsible for any and all actions taken by Sponsored User and any person acting on behalf of or in the name of Sponsored User;

(C) Sponsoring Trading Permit Holder will be bound by and comply with Cboe Exchange, Inc.'s Certificate of Incorporation, Bylaws, Rules, Circulars and procedures, as well as any other equivalent documents (the "Cboe Options Rules"); and

(D) Sponsoring Trading Permit Holder must maintain an up-to-date list of persons who could obtain access to the Exchange on behalf of Sponsored User (i.e., Authorized Traders) and provide that list to the Exchange upon request. In addition, Sponsoring Trading Permit Holder must have reasonable procedures to ensure that Sponsored User and all of Sponsored Users' Authorized Traders: (i) maintain the physical security of the Exchange, which includes, but is not limited to, the equipment for accessing the facilities of the Exchange, to prevent the unauthorized use or access to the Exchange, including the unauthorized entry of information into the Exchange, or the information and data made available therein; and (ii) otherwise comply with the Cboe Options Rules. If the Exchange determines that Sponsored User or an Authorized Trader has caused Sponsoring Trading Permit Holder to violate the Cboe Options Rules, the Exchange may direct Sponsoring Trading Permit Holder to suspend or withdraw Sponsored User's status as a Sponsored User or the person's status as an Authorized Trader and, if so directed, Sponsoring Trading Permit Holder must suspend or withdraw such status.

Sponsored User agrees:

(A) to be bound by and comply with the Cboe Options Rules as if Sponsored User were a Cboe Options Trading Permit Holder;

(B) to maintain, keep current and provide to Sponsoring Trading Permit Holder a list of persons who have been granted access to the Exchange on behalf of Sponsored User ("Authorized Traders");

(C) to familiarize its Authorized Traders with all of Sponsored User's obligations under Rule 6.20A and assure that they receive appropriate training prior to any use of or access to the Exchange;

(D) to not permit anyone other than Authorized Traders to use or obtain access to the Exchange;

(E) to take reasonable security precautions to prevent unauthorized use or access to the Exchange, including unauthorized entry of information into the Exchange, or the information and data made available by the Exchange and to be responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of Sponsored User and any person acting on behalf of or in the name of Sponsored User, and for the trading and other consequences thereof;

(F) to establish adequate procedures and controls to permit it to effectively monitor use of and access to the Exchange by any person acting on behalf of or in the name of Sponsored User for compliance with the terms of these sponsorship provisions;

(G) to pay when due all amounts, if any, payable to Sponsoring Trading Permit Holder, the Exchange or any other third parties that arise from Sponsored User's use of or access to the Exchange, including, but not limited to, applicable Exchange and regulatory fees; and

(H) that the Sponsoring Trading Permit Holder/Sponsored User relationship in no way conveys any "Trading Permit Holder," "TPH organization" or "associated person" status, interests or rights upon Sponsored User under Cboe Options Rules. Without limiting the generality of the forgoing, Sponsored User status is non-transferable and Sponsored User has no interest in the assets or property of the Exchange, and has no right to share in any distribution of the Exchange or to vote on any matters submitted to Trading Permit Holdership for vote. In addition, Sponsored User is not considered a "member" or "associated person of a member" for purposes of the Exchange Act, or the rules and regulations thereunder, and is not subject to the disciplinary jurisdiction of the Exchange.

Sponsoring Trading Permit Holder and Sponsored User must enter into and maintain this Sponsored User Agreement with the Exchange and agree to be bound by any Sponsored User Agreement Schedules issued by the Exchange. Sponsoring Trading Permit Holder and Sponsored User must also enter into and maintain a customer agreement(s) establishing a proper relationship(s) and account(s) through which Sponsored User will be permitted to trade on the Exchange.

To the extent any provision of this Agreement conflicts with any change in applicable law, the regulations of the Securities and Exchange Commission, or Cboe Options Rules, such law, regulation, or Cboe Options Rule shall supersede that provision.

Acknowledged and agreed to by Sponsoring Trading Permit Holder:

Sponsoring Trading Pe	ermit Holder's Name:	
CRD No.:	OCC No. (if applicable):	
Sponsoring Trading Po	ermit Holder Representative (signature):	:
Sponsoring Trading Po	ermit Holder Representative (name):	·
Phone:	Email:	
Title:	Dat	e:

Acknowledged and agreed to by Sponsored User:

Sponsored User's Name:		
CRD No. (if applicable):	·	
Corporate Form:	State of Organizati	on:
Sponsored User Representative (sig	nature):	
Sponsored User Representative (na	me):	
Business Address:		
Phone:	_Email:	
Title:		Date:

Cboe Options Exchange Sponsored User Letter of Authorization

To be completed, if applicable, by Sponsoring Trading Permit Holder's clearing firm (see Cboe Options Rule 6.20A for definitions and requirements).

To the extent Sponsoring Trading Permit Holder is not a clearing firm, Sponsoring Trading Permit Holder's clearing firm, which must be a Cboe Options TPH organization, hereby accepts responsibility for the clearance of Sponsored User's transactions.

Acknowledged and agreed to by Sponsoring Trading Permit Holder's Clearing Firm:

Clearing Firm's Name:				
CRD No.:		OCC No.:		
Clearing Firm Representa	_			
Clearing Firm Representa Phone:	• • •			
Title:		Date:		
Accepted by Cboe Options:				
By (Signature):				
Name:		•		
Title:		Date:	•	-

Sponsored User may only maintain and utilize electronic access to directly enter orders through Sponsoring Trading Permit Holder on the CFLEX Trading System if Sponsored User and Sponsoring Trading Permit Holder are subject to a valid, ongoing Sponsoring Trading Permit Holder/Sponsored User relationship and are parties to an effective Sponsored User Agreement. Refer to the Sponsored User Agreement or Cboe Options Rules for definitions of terms used herein.

BY USING THE CFLEX TRADING SYSTEM, SPONSORED TRADING PERMIT HOLDER AND SPONSORING USER ACKNOWLEDGE AND AGREE TO THE FOLLOWING TERMS OF USE.

The use of the CFLEX Trading System is subject to this Schedule and to the Cboe Options Rules, including, without limiting the generality of the foregoing, Rules that limit the liability of the Exchange with respect to the use of facilities of the Exchange. If Sponsored User is not a Cboe Options Trading Permit Holder, by using the CFLEX Trading System Sponsored User agrees to be bound by and comply with the Cboe Options Rules as if Sponsored User were a Cboe Options trading permit holder with respect to Sponsored User's use of the CFLEX Trading System.

Attachment B Sponsored User's List of Authorized Traders

Rule 6.20A(b)(1)(ii)(D) provides that a Sponsored User agree that it will maintain, keep current and provide to the Sponsoring Trading Permit Holder a list of Authorized Traders. Rule 6.20A(b)(2) also provides in relevant part that a Sponsoring Trading Permit Holder must maintain an up-to-date list of the Sponsored User's Authorized Traders and must provide that list to the Exchange upon request.

Provide the names of the Sponsored User's initial Authorized Traders in the area below (a typed attachment with the same information will also suffice). Updates to this form must be provided to the Exchange whenever the Sponsored User adds or removes an Authorized Trader. The Exchange also recommends that the Sponsored Users have unique Authorized Trader IDs associated with each order submitted to the Exchange. Sponsored Users should provide this Authorized Trader ID information using Tag 116 (OnBehalfOfSubId) in the FIX order message, or the UserAssignedID field for orders submitted using CMi. CMi users must place "116=" in front of the Authorized Trader ID.¹

.....

Sponsored User Name: ____

Sponsoring Trading Permit Holder Name: _____

AUTHORIZED TRADER	
Name:	
Business Address:	
Phone: Fax	
Email:	
Authorized Trader's unique ID:	
AUTHORIZED TRADER	
Name:	
Business Address:	
Phone: Fa	ах:
Email:	
Authorized Trader's unique ID:	

¹ If the Sponsored User is not utilizing a unique identifier for each Authorized Trader, the Exchange recommends that the Sponsored User should begin populating Tag 116 (OnBehalfOfSubId) in the FIX data with unique identifiers. CMI users should populate the UserAssignedID field in the following manner: 116=[insert unique identifier]. The Exchange recommends that unique identifiers for each Authorized Trader be used at all times. If the Sponsored User has questions concerning the format of order messages, it may contact the Exchange's API Group. Updated October 19, 2017

AUTHORIZED TRAD	ER		
Name:			
Business Address:		·	· .
Phone:	*	Fax:	
Email:		·	
Authorized Trader'	s unique ID:		
AUTHORIZED TRAD	DER		
Name:			
Business Address:	<u> </u>		
Phone:		Fax:	
Email:			
Authorized Trader	's unique ID:		
AUTHORIZED TRAI	DER		
Name:			
Business Address:			
Phone:		Fax:	
Email:			
Authorized Trader	's unique ID:	·	

□ Additional Authorized Traders are submitted in a separate document attached hereto.

Signature of Sponsoring Trading Permit Holder Representative:

Date: _____

ATTACHMENT C Rule 6.20A, Sponsored Users

(a) General. This Rule governs electronic access for the entry and execution of orders by Sponsored Users with authorized access to the facilities and products specified below (referred to herein as the "Exchange System(s)") and the applicable requirements that Sponsored Users and Sponsoring Trading Permit Holders are required to satisfy in order to engage in a Sponsoring Trading Permit Holder/Sponsored User relationship. For purposes of this Rule, a "Sponsored User" is a person or entity that has entered into a sponsorship arrangement with a Sponsoring Trading Permit Holder for purposes of receiving electronic access to the Exchange System(s).

(b) Sponsored User. A Sponsored User may obtain and maintain authorized electronic access to the Exchange System(s), only if such access is authorized in advance by one or more Sponsoring Trading Permit Holders as follows:

(1) A Sponsored User must enter into a sponsorship arrangement with a "Sponsoring Trading Permit Holder," which is defined as a TPH organization that agrees to sponsor the Sponsored User's access to the Exchange System(s). The sponsorship arrangement consists of three separate components:

(i) The Sponsored User must enter into and maintain a customer agreement(s) with its Sponsoring Trading Permit Holder(s), establishing a proper relationship(s) and account(s) through which the Sponsored User will be permitted to trade on the Exchange System(s).

(ii) For a Sponsored User to obtain and maintain authorized access to the Exchange System(s), the Sponsored User and its Sponsoring Trading Permit Holder must enter into a written agreement that incorporates the following sponsorship provisions:

(A) The Sponsored User and its Sponsoring Trading Permit Holder must have entered into and maintained a Sponsored User Agreement with the Exchange.

(B) The Sponsoring Trading Permit Holder acknowledges and agrees that:

(I) all orders entered by its Sponsored User, any person acting on behalf of such Sponsored User (*e.g.*, employees or agents of the Sponsored User), or any person acting in the name of such Sponsored User (*e.g.*, customers of the Sponsored User) and any executions occurring as a result of such orders are binding in all respects on the Sponsoring Trading Permit Holder; and

(II) the Sponsoring Trading Permit Holder is responsible for any and all actions taken by such Sponsored User and any person acting on behalf of or in the name of such Sponsored User.

(C) The Sponsoring Trading Permit Holder agrees that it will be bound by and comply with the Exchange's Certificate of Incorporation, Bylaws, Rules and procedures, as well as any other equivalent documents pertaining to the Exchange System(s) (the "Exchange Rules"), and the Sponsored User agrees that it will be bound by and comply with the Exchange Rules as if the Sponsored User were a Trading Permit Holder.

(D) The Sponsored User agrees that it will maintain, keep current and provide to the Sponsoring Trading Permit Holder a list of persons who have been granted access to the Exchange System(s) on behalf of the Sponsored User ("Authorized Traders").

(E) The Sponsored User agrees that it will familiarize its Authorized Traders with all of the Sponsored User's obligations under this Rule and will assure that they receive appropriate training prior to any use of or access to the Exchange System(s).

(F) The Sponsored User agrees that it will not permit anyone other than Authorized Traders to use or obtain access to the Exchange System(s).

(G) The Sponsored User agrees that it will take reasonable security precautions to prevent unauthorized use of or access to the Exchange System(s), including unauthorized entry of information into the Exchange System(s), or the information and data made available by the Exchange. The Sponsored User understands and agrees that it is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security

Updated October 19, 2017

codes of the Sponsored User and any person acting on behalf of or in the name of such Sponsored User, and for the trading and other consequences thereof.

(H) The Sponsored User acknowledges its responsibility for establishing adequate procedures and controls that permit it to effectively monitor use of and access to the Exchange System(s) by any person acting on behalf of or in the name of The Sponsored User for compliance with the terms of these sponsorship provisions.

(I) The Sponsored User agrees that it will pay when due all amounts, if any, payable to the Sponsoring Trading Permit Holder, the Exchange or any other third parties that arise from the Sponsored User's use of or access to the Exchange System(s). Such amounts include, but are not limited to, applicable Exchange and regulatory fees.

(iii) The Sponsored User and Sponsoring Trading Permit Holder must provide the Exchange with a Sponsored User Agreement acknowledging and agreeing to the requirements of this Rule, including an acknowledgement by the Sponsoring Trading Permit Holder of its responsibility for the orders, executions and actions of its Sponsored User. To the extent the Sponsoring Trading Permit Holder is not a clearing firm, the Sponsoring Trading Permit Holder's clearing firm, which must be a TPH organization, must provide the Exchange with a Letter of Authorization, which specifically accepts responsibility for the clearance of the Sponsored User's transactions. Upon approval by the Clearing Corporation, if applicable, and filing with the Exchange, an existing Letter of Authorization may be amended to include the Sponsoring Trading Permit Holder/Sponsored User relationship. Sponsored User Agreements and Letters of Authorization filed with the Exchange will remain in effect until a written notice of revocation has been filed with the TPH Department. If such a written notice of revocation has not been filed with the TPH Department at least one hour prior to the opening of trading on the particular business day, such revocation shall not become effective until the close of trading on such day. A revocation shall in no way relieve the Sponsoring Trading Permit Holder or, if applicable, the Sponsoring Trading Permit Holder's clearing firm of responsibility for transactions guaranteed prior to the effective date of the revocation.

(2) Each Sponsoring Trading Permit Holder must maintain an up-to-date list of persons who may obtain access to the Exchange System(s) on behalf of its Sponsored Users (*i.e.*, Authorized Traders) and must provide that list to the Exchange upon request. In addition, each Sponsoring Trading Permit Holder must have reasonable procedures to ensure that Sponsored User and all of its Sponsored Users' Authorized Traders: (i) maintain the physical security of the Exchange and the System, which includes, but is not limited to, the equipment for accessing the facilities of the Exchange and the Exchanges System(s), to prevent the unauthorized use or access to the Exchange or the Exchange System(s), including the unauthorized entry of information into the Exchange or the Exchange System(s), or the information and data made available therein; and (ii) otherwise comply with the Exchange Rules. If the Exchange determines that a Sponsored User or an Authorized Trader has caused a Sponsoring Trading Permit Holder to violate the Exchange Rules, the Exchange may direct the Sponsoring Trading Permit Holder to suspend or withdraw the Sponsored User's status as a Sponsored User or the person's status as an Authorized Trader and, if so directed, the Sponsoring Trading Permit Holder must suspend or withdraw such status.

Adopted November 15, 2007 (06-99); amended April 10, 2008 (08-37); June 27, 2008 (08-54); June 18, 2010 (10-058).

... Interpretations and Policies:

.01 Sponsored Users shall be permitted for the following Exchange Systems: the FLEX Hybrid Trading System ("FLEX"), CBSX and CBOE. For FLEX and CBSX, the number of Sponsored Users shall be unlimited. Except for FLEX and CBSX, the number of Sponsored Users shall be limited to a total of 15 persons/entities ("Sponsored User Slots"). Sponsored User applications for the CBOE Sponsored User Slots shall be submitted to the Exchange's TPH Department in a manner acceptable to the Exchange and will be processed in the order they are received on a time-stamped basis. For applications received via facsimile or email the time-stamp shall be the time the email/facsimile is received by the TPH Department. If there are more Sponsored User applications than Sponsored User Slots, the Exchange will maintain a waitlist and use a First In, First Out ("FIFO") method for filling the 15 Sponsored User Slots. In the event a Sponsored User application is determined by the TPH Department to be incomplete, the application will not be considered to have been submitted under the FIFO method until a completed application is submitted.

Adopted June 27, 2008 (08-54); June 18, 2010 (10-058).

Updated October 19, 2017

Cboe Options Exchange On-Floor Designated Primary Market-Maker (DPM) Appointment Application

	I. APPLIC	CANT DATA	
Name of Member Organiza	ation:		
Address:			
City:		State:	Zip:
Phone:			
	TYPE OF OF	RGANIZATION	
□ Corporation □	Limited Liability Company	Partnership	Other
	II. DESIGNEI	E INFORMATION	
	ndividuals who will act on behal signees, and all designees must		
	IGNEE #1		SNEE #2
Name:		Name:	
Address:		Address:	
Email:		Email:	
Phone:		Phone:	
Primary DPM	Alternate DPM	Primary DPM	Alternate DPM
DES	IGNEE #3	DESI	GNEE #4
Name:		Name:	
Address:		Address:	
Email:		Email:	
Phone:		Phone:	
Primary DPM	Alternate DPM	Primary DPM	Alternate DPM
DES	IGNEE #5	DESIC	GNEE #6
Name:		Name:	
Address:		Address:	
Email:		Email:	
Phone:		Phone:	
Primary DPM	Alternate DPM	Primary DPM	Alternate DPM

III. APPLICANT INFORMATION						
Identify the owners, partners, members and designees of the applicant DPM member organization as follows:						
Names of Owners, Partners, Members, Designees	Title or Status	\$ Capital Contribution	% Profit	% Loss -	Intends to act as a DPM YES NO	
		· .				
		a for a second				
		· · · ·				

IV. ADDITIONAL INFORMATION

A. Please list those owners, partners, members and designees of this DPM applicant organization who are affiliated in any way with another DPM organization. Include the extent of the affiliation, including amounts of capital contributions, % profits, % losses, voting rights etc.

B. Describe in detail, the proposed day-to-day operation of the DPM station. Include information such as: Who will be the Primary and Alternate DPMs at the station; how many hours/days/months will these people be employed at the station; describe the autonomy of each designee who will man the station; how many clerks will continuously support the operation etc.

C. Note any disciplinary or remedial action taken against any individual or organization named in this application other than action taken pursuant to an SRO minor rule violation plan. If any disciplinary or remedial action has been taken, describe in detail the circumstances surrounding each action and identify the issuing SRO or governmental agency. Also note and describe any warnings issued to any individual or organization named in this application related to a capital or operational problem, rules of trading procedure or evaluation of market quality and identify the issuing SRO or Governmental agency.

V. TRADING HISTORY

Describe, in detail, all industry experience as well as the relevant trading experience of each designee named in this application. Include all experience as a floor broker, market-maker or proprietary (firm) trader. Where applicable, a resume may accompany the application.

DESIGNEE #1

DESIGNEE # 2

DESIGNEE # 3

DESIGNEE # 4

DESIGNEE # 5 DESIGNEE # 6

VI. MARKET SERVICE

Describe the efforts which are proposed by the applicant to provide the highest quality service to member organizations conducting business at Cboe Options. Responses should be specific with respect to willingness to participate in marketing efforts, maintaining competitive markets, competing with other marketplaces, and promoting Cboe Options as the marketplace of choice.

VII. MARKET QUALITY

Describe the level of market quality which the applicant proposes to maintain. Specifically, note commitments to bid-ask spread differentials, firmness, size and depth of markets.

VIII. OPERATIONAL CONSIDERATIONS

A. Describe the level of staffing which the applicant intends to have available (or if Exchange staff is to be used, the staffing level expected to be requested by the applicant). In addition, describe any special technology which the applicant desires to use in support of an appointment.

B. Describe the arrangements which have been made to assure that the DPM station is continuously operated by approved and experienced primary and alternate DPMs.

C. Describe the arrangements which have been made to establish a universal acronym for streaming quotes for the DPM Applicant.

IX. CAPITAL

Note the financial resources that the DPM Applicant proposes to commit. Provide details such as: The specific dollar amount; the name(s) of the source(s); whether or not the source(s) has any management responsibility or participates in the profits/losses of the operation and to what extent the source(s) participates in management and/or profits/losses. If the money is borrowed, note the repayment schedule. Provide any other related information that should be considered by the Exchange.

 X. MISCELLANEOUS

 A. Describe the arrangements which have been agreed to by the organization related to the termination of the DPM appointment. Specifically, note the provisions for division of post-appointment revenue sharing (if any).

 B. Note any additional information which the applicant deems pertinent to this application.

AUTHORIZATION

I have carefully read the questions contained on this application and the responses that have been provided to those questions. On behalf of the DPM applicant organization, I represent that the responses provided and any other information provided to Cboe Options on behalf of the DPM applicant organization in connection with this application is current, accurate, and complete.

Authorized Principal:	Title:
Signature of Authorized Principal:	Date:

Cboe Options Exchange On-Floor Lead Market-Maker (LMM) Appointment Application

	I. APPLIC	CANT DATA			
Name of Member Or	ganization:				
Address:				4 a	· · ·
City:		State:	· .	Zip:	
Phone:					
	TYPE OF O	RGANIZATION			
Corporation	Limited Liability Company	Partnership	🗆 Ot	her	
L					-
	II. DESIGNE	EINFORMATION			

Information concerning individuals who will act on behal completed for all LMM designees.	f of the LMM (designees). This information must be
DESIGNEE #1	DESIGNEE #2
Name/ACR:	Name/ACR:
Address:	Address:
Email:	Email:
Office Phone:	Office Phone:
Mobile/Pit Phone:	Mobile/Pit Phone:
DESIGNEE #3	DESIGNEE #4
Name/ACR:	Name/ACR:
Address:	Address:
Email:	Email:
Office Phone:	Office Phone:
Mobile/Pit Phone:	Mobile/Pit Phone:
DESIGNEE #5	DESIGNEE #6
Name/ACR:	Name/ACR:
Address:	Address:
Email:	Email:
Office Phone:	Office Phone:
Mobile/Pit Phone:	Mobile/Pit Phone:

	III. APPLICANT INFORMATION					
Identify the owners, p	partners, members	and designees of th	e applicant LMM m	ember organizatior	n as follow	S:
Names of Owners, Partners, Members, Designees	Title or Status	\$ Capital Contribution	% Profit	% Loss	Intends to act as a LMM YES NO	
· · · · · ·						

IV. ADDITIONAL INFORMATION

A. Please list those owners, partners, members and designees of this LMM applicant organization who are affiliated in any way with another LMM organization. Include the extent of the affiliation, including amounts of capital contributions, % profits, % losses, voting rights etc.

B. Describe in detail, the proposed day-to-day operation of the LMM station. Include information such as: Who will be the LMM designees at the station; how many hours/days/months will these people be employed at the station; describe the autonomy of each designee who will man the station; how many clerks will continuously support the operation etc.

C. Note any disciplinary or remedial action taken against any individual or organization named in this application other than action taken pursuant to an SRO minor rule violation plan. If any disciplinary or remedial action has been taken, describe in detail the circumstances surrounding each action and identify the issuing SRO or governmental agency. Also note and describe any warnings issued to any individual or organization named in this application related to a capital or operational problem, rules of trading procedure or evaluation of market quality and identify the issuing SRO or Governmental agency.

V. TRADING HISTORY

Describe, in detail, all industry experience as well as the relevant trading experience of each designee named in this application. Include all experience as a floor broker, market-maker or proprietary (firm) trader. Where applicable, a resume may accompany the application.

DESIGNEE #1

DESIGNEE # 2

DESIGNEE # 3

DESIGNEE # 4

DESIGNEE # 5 DESIGNEE # 6 VI. MARKET SERVICE

Describe the efforts which are proposed by the applicant to provide the highest quality service to member organizations conducting business at Cboe Options. Responses should be specific with respect to willingness to participate in marketing efforts, maintaining competitive markets, competing with other marketplaces, and promoting Cboe Options as the marketplace of choice.

VII. MARKET QUALITY

Describe the level of market quality which the applicant proposes to maintain. Specifically, note commitments to bid-ask spread differentials, firmness, size and depth of markets.

VIII. OPERATIONAL CONSIDERATIONS

A. Describe the level of staffing which the applicant intends to have available.

B. Describe the arrangements which have been made to assure that the LMM station is continuously operated by approved and experienced LMM designees.

IX. CAPITAL

Note the financial resources that the LMM Applicant proposes to commit. Provide details such as: The specific dollar amount; the name(s) of the source(s); whether or not the source(s) has any management responsibility or participates in the profits/losses of the operation and to what extent the source(s) participates in management and/or profits/losses. If the money is borrowed, note the repayment schedule. Provide any other related information that should be considered by the Exchange.

X. MISCELLANEOUS

Note any additional information which the applicant deems pertinent to this application.

AUTHORIZATION

I have carefully read the questions contained on this application and the responses that have been provided to those questions. On behalf of the LMM applicant organization, I represent that the responses provided and any other information provided to Cboe Options on behalf of the LMM applicant organization in connection with this application is current, accurate, and complete.

Authorized Principal:	Title:
Signature of Authorized Principal:	Date:

Cboe Options Exchange Off-Floor Designated Primary Market-Maker (DPM) Appointment Application

	I. APPLI	CANT DATA		
Name of TPH Organ	ization:			
Address:				
City:		State:	Zip:	
Phone:				
	TYPE OF C	RGANIZATION		
Corporation	Limited Liability Company	Partnership	□ Other	

II. DESIGNEE INFORMATION

Please identify the responsible person(s) who will be staffing the Off-Floor DPM operation on a day-to-day basis (i.e. the person(s) who will set quotes and sizes, monitor trading activity, be available on a real-time basis to resolve trading disputes, etc.)

DESIGNEE #1			DESIGNEE #2		
Name:		Name:			
Email:		Email:			
Phone:		Phone:			
Primary DPM	Alternate DPM	Primary DPM	Alternate DPM		
DESIGNEE #3			DESIGNEE #4		
Name:		Name:			
Email:		Email:			
Phone:		Phone:			
Primary DPM	Alternate DPM	Primary DPM	Alternate DPM		

	III. APPLICANT INFORMATION						
Identify the owners, pa	artners, members	and designees of th	ne applicant DPM T	PH organization as	follows:		
Names of Owners, Partners, Members,		\$ Capital			Intends to act as a DPM		
Responsible Persons	Title or Status	Contribution	% Profit	% Loss	YES	NO	

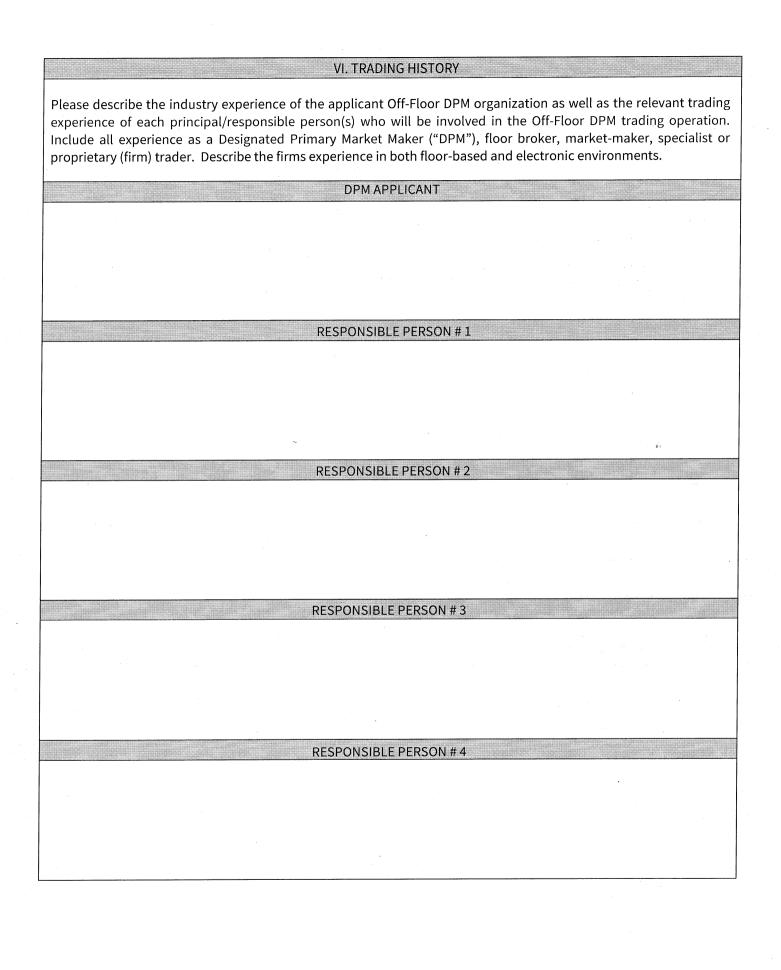
IV. APPLICANT INFORMATION

Please list those owners, partners, principals and any other responsible persons (see II. Above) of this Off-Floor DPM applicant organization who are affiliated in any way with another DPM organization. Include the extent of the affiliation, including amounts of capital contributions, % profits, % losses, voting rights etc. List any additional information below.

Name	Title or Status	Affiliated Organization	\$ Capital Contribution	% Profit/Losses	Voting Rights
				-	
		···			

V. ADDITIONAL INFORMATION

Note any disciplinary or remedial action taken against any individual or organization named in this application other than action taken pursuant to an SRO minor rule violation plan. If any disciplinary or remedial action has been taken, describe in detail the circumstances surrounding each action and identify the issuing SRO or governmental agency. Also note and describe any warnings issued to any individual or organization named in this application related to a capital or operational problem, rules of trading procedure or evaluation of market quality and identify the issuing SRO or Governmental agency.



VII. PAST SUCCESS IN MARKET MAKING

Please describe, in detail, the methods used by the applicant organization to attract order flow and indicate the applicant's past success in this regard. Give specific data on the applicant's track record with regard to increasing volume and market share in classes where it was granted a specialist or specialist-like appointment.

VIII. MARKET SERVICE

Describe the methods that the applicant organization commits to employ that will provide the greatest results in attracting order flow to Cboe Options. Responses should be specific with respect to the following: Commitment in terms of personnel and dollars to marketing efforts; participation in the Exchange's Payment For Order Flow program, and promotion of Cboe Options as the marketplace of choice. Additionally, please describe how the applicant intends to promote and manage customer relations including responding to individual requests from customers, problem resolution and ongoing customer service support.

IX. MARKET QUALITY

Describe the level of market quality that the applicant will maintain in order be competitive with other marketplaces as well as with other Cboe Options TPHs who are making markets in the same class(es). Specifically, note commitments to bid-ask spread differentials, firmness, size and depth of markets, and number and frequency of quotes.

X. OPERATIONAL CONSIDERATIONS

Please describe any special technology that the applicant will use in support of an Off-Floor DPM appointment, including primary autoquote system and backup system(s). Please note the levels of electronic capacity, stability and reliability of your autoquote system and backup system(s).

Describe how the applicant intends to promote and manage customer relations and ensure that the Off-Floor DPM operation is continuously operated by approved and experienced responsible persons. Please include the name(s) and contact information of each responsible person who will be available at least ½ hour prior to the open and 1 hour following the close, as well as throughout the trading day, to respond to customer complaints and/or inquiries.

If approved as an Off-Floor DPM, please indicate if the applicant intends to have a DPM Designee trade in open outcry in the option classes allocated to the Off-Floor DPM. Please include the name(s) and contact information of each DPM designee that will be stationed on the trading floor.

XI. ORDER FLOW DEDICATION

Given Cboe Options' dedication to filling its customers' orders at the best available price (NBBO), describe your commitment to providing the NBBO to all customers including those customers' orders resulting from your firm's captive order flow (or order flow garnered as part of your organization's brokerage operation).

XII. CAPITAL								
Note the financial resources that the Off-Floor DPM Applicant proposes to commit. Provide details such as: The								
specific dollar amount; the name(s) of the source(s); whether or not the source(s) has any management								
responsibility or participates in the profits/losses of the operation and to what extent the source(s) participates in								
management and/or profits/losses. If the money is borrowed, note the repayment schedule. Provide any other								
related information that should be considered by the Exchange.								
related mornation that should be considered by the Exemple.								
XIII. MISCELLANEOUS								
Note any additional information which the applicant deems pertinent to this application.								
AUTHORIZATION								

I have carefully read the questions contained on this application and the responses that have been provided to those questions. On behalf of the Off-Floor DPM applicant organization, I represent that the responses provided and any other information provided to Cboe Options on behalf of the Off-Floor DPM applicant organization in connection with this application is current, accurate, and complete.

Authorized Principal:	Title:		
Signature of Authorized Principal:	Date:		

Please return the Application, along with the necessary attachment(s), to TPH Administration at mqa@cboe.com.

Cboe Exchange, Inc. Form 1 Registration Statement: Exhibit K

Exhibit K

Exhibit Request:

This Exhibit is applicable only to exchanges that have one or more owners, shareholders, or partners that are not also members of the exchange. If the exchange is a corporation, please provide a list of each shareholder that directly owns 5% or more of a class of a voting security of the applicant. If the exchange is a partnership, please provide a list of all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of the partnership's capital. For each of the persons listed in the Exhibit K, please provide the following:

1. Full legal name;

2. Title or Status;

- 3. Date title or status was acquired;
- 4. Approximate ownership interest; and
- 5. Whether the person has control, a term that is defined in the instructions to this Form.

Response:

Cboe Exchange, Inc. is wholly owned by Cboe Global Markets, Inc. Cboe Global Markets, Inc. is the sole member of Cboe C2 Exchange, Inc., and acquired its interest in Cboe C2 Exchange, Inc. on June 15, 2010. Cboe Global Markets, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions.

<u>Exhibit M</u>

Exhibit Request:

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

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

Response:

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

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
ABN AMRO Clearing Chicago, LLC	10/15/2008	10/1/2010	5/25/2010	5/27/2010	5/13/1985	9/24/2010	Member / TPH	175 W Jackson Boulevard Suite 400	312-604-8000	Market Maker
ACS Execution Services, LLC	1/15/2016	1/15/2016	1/15/2016	1/15/2016	NA	NA	Member / TPH	Chicago, IL 60604 12 Broad Street 2nd Floor Red Bank, NJ 07701	732-204-8999	Proprietary
Agency Desk, LLC	7/1/2009	NA	NA	NA	NA	NA	Member / TPH	590 Madison Avenue 21st Floor	212-935-9835	Market Maker
Akuna Securities, LLC	9/15/2015	NA	NA	8/14/2017	2/2/2012	2/12/2015	Member / TPH	New York, NY 10022 333 S Wabash Avenue Suite 2600 Chicago III 60604	312-994-4640	Market Maker
Albert Fried & Company, LLC	8/18/2008	4/15/2011	5/18/2010	5/18/2010	NA	NA	Member / TPH	Chicago, IL 60604 31 W 52nd Street New York, NY 10019	212-827-7000	Agency
Alpha Trading LP	10/24/2017	10/24/2017	10/24/2017	10/24/2017	NA	NA	Member / TPH	640 W California Avenue Sunnyvale, CA 94086	408-990-1940	Market Maker Proprietary Trading
Alpine Securities Corporation	11/3/2008	11/15/2010	NA	NA	NA	NA	Member / TPH	39 Exchange Place Salt Lake City, UT 84111	801-355-5588	Agency
Andrie Trading LLC	NA	NA	NA	NA	10/1/1999	NA	Member / TPH	440 S LaSalle Street Suite 1110 Chicago, IL 60605	312-663-8195	
Apex Clearing Corporation	6/5/2012	6/5/2012	6/5/2012	6/5/2012	6/6/2012	6/6/2012	Member / TPH	One Dallas Center 350 N St. Paul, Suite 1300 Dallas, TX 75201	214-765-1055	Clearing Firm
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 NYSE Arca, Inc., NYSE, LLC and NYSE MKT, LLC
Athena Capital Research, LLC	7/1/2009	10/20/2010	NA	NA	NA	NA	Sponsored Participant	440 9th Avenue 11th Floor New York, NY 10001	212-931-9056	
ATM Execution LLC	3/15/2012	3/15/2012	3/21/2012	3/21/2012	NA	NA	Member / TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Market Maker
Auerbach Grayson and Company, LLC	NA	NA	12/15/2015	NA	NA	NA	Member / TPH	25 W 45th Street Suite 16 New York, NY 10036	212-557-4444	Arbitrage/Riskless
Barciays Capital, Inc.	8/18/2008	10/1/2010	5/14/2010	5/14/2010	9/22/2008	10/6/2010	Member / TPH	745 7th Avenue New York, NY 10019	212-526-7000	
Bats Trading, Inc.	10/23/2008	9/1/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	8050 Marshall Drive Suite 120 Lenexa, KS 66214	913-815-7000	Limited Routing Facility of the Cboe Exchanges (BZX, BYX, EDGA, EDGX)
Bay Crest Partners, LLC	10/15/2008	NA	5/25/2010	5/27/2010	NA	NA	Member / TPH	40 Wall Street 42nd Floor New York, NY 10005	212-480-1400	Agency
Bayes Capital, LLC	1/15/2015	1/30/2015	1/30/2015	1/30/2015	NA	NA	Member / TPH	54 Jefferson Avenue Suite 2 Westwood, NJ 07675	201-660-7187	Agency
Belvedere Trading, LLC	11/1/2011	3/1/2012	11/29/2011	NA	1/3/2005	4/4/2011	Member / TPH	10 S Riverside Plaza Suite 2100 Chicago, IL 60606	312-893-3750	Proprietary
Bengal Capital Trading LLC	NA	NA	NA	NA	1/15/2013	NA	Member / TPH	440 S LaSalle Street Suite 2121 Chicago, IL 60605	312-362-4928	
Benjamin & Jerold Brokerage I, LLC	10/1/2009	NA	NA	NA	NA	NA	Member / TPH	80 Broad Street 6th Floor New York, NY 10005	646-558-0055	Agency
BGC Financial, LP	8/17/2009	NA	NA	NA	NA	NA		One Seaport Plaza 19th Floor New York, NY 10038	646-346-7000	Agency
Blaylock Van, LLC	5/3/2010	NA	NA	NA	NA	NA		600 Lexington Avenue 3rd Floor New York, NY 10022	212-715-6600	Agency
Bloomberg Tradeback, LLC	10/23/2008	10/4/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	919 3rd Avenue New York, NY 10022	646-324-3178	Agency
Blue Fire Capital, LLC	8/18/2008	10/8/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	311 S Wacker Drive Suite 2000 Chicago, IL 60606	312-242-0500	Proprietary
Bluefin Trading, LLC	8/3/2009	6/1/2015	9/27/2013	8/13/2013	4/27/2009	NA	Member / TPH	3 Park Avenue 37th Floor New York, NY 10016	212-457-9150	Agency
BMO Capital Markets Corp.	8/18/2008	11/15/2010	7/15/2014	7/15/2014	10/8/2013	11/15/2013	Member / TPH	3 Times Square New York, NY 10036	212-885-4000	Agency
BMT Trading, LLC	2/1/2010	NA	NA	NA	NA	NA		800 3rd Avenue New York, NY 10022	212-813-0870	Proprietary
BNP Paribas Prime Brokerage, Inc.	12/3/2012	12/3/2012	NA	NA	5/18/2012	NA	Member / TPH	787 7th Avenue New York, NY 10019	212-471-6768	Clearing Firm
BNP Paribas Securities Corp.	8/18/2008	9/15/2010	5/25/2010	5/27/2010	1/5/2005	10/15/2010	Member / TPH	787 7th Avenue New York, NY 10019	212-841-2000	Proprietary
BNY Mellon Capital Markets, LLC	NA	NA	NA	1/17/2017	NA	NA	Member / TPH	101 Barclay Street New York, NY 10286	212-815-4972	Market Maker
Boerboel Capital, LLC	NA	NA	NA	NA	2/1/2017	NA		300 N LaSalle Street Suite 2060 Chicago, IL 60654	708-967-6843	
BTIG, LLC	8/18/2008	11/15/2010	5/25/2010	5/27/2010	NA	NA		600 Montgomery Street 6th Floor San Francisco, CA 94111	415-248-2200	Market Maker
C&C Trading, LLC	8/18/2008	10/11/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	71 Arch Street 1st Floor Greenwich, CT 06830	212-706-1227	Proprietary
Canaccord Genuity, Inc.	10/1/2013	10/1/2013	6/10/2010	6/10/2010	NA	NA	Member / TPH	535 Madison Avenue New York, NY 10022	212-389-8000	Market Maker
Canadian Imperial Holdings, Inc.	10/15/2008	11/15/2010	NA	NA	NA	NA	Barticipant	300 Madison Avenue 5th Floor New York, NY 10017	212-856-3877	Proprietary
Cantor Fitzgerald & Co.	10/23/2008	2/13/2015	5/25/2010	5/27/2010	NA	NA		110 E 59th Street 4th Floor New York, NY 10022	212-938-5000	Institutional / Agency
Capital Institutional Services, Inc.	8/18/2008	NA	5/25/2010	5/27/2010	NA	NA	Member / TPH	1700 Pacific Avenue Suite 1100 Dallas, TX 75201	214-720-0055	Agency
Cardinal Capital Management LLC	NA	NA	NA	NA	10/1/2007	NA		141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	
CF Global Trading, LLC	10/23/2008	1/3/2011	NA	NA	NA	NA	Member / TPH	60 E 42nd Street Suite 1455 New York, NY 10165	212-888-4711	Market Maker
Charles Schwab & Co., Inc.	NA	NA	NA	4/3/2017	6/2/1980	NA	Member / IPH	211 Main Street San Francisco, CA 94105	415-636-7000	Public Customer Business
Chimera Securities, LLC	6/2/2014	6/2/2014	6/25/2014	6/25/2014	NA	NA	Member / TPH	27 Union Square W 4th Floor New York, NY 10003	646-597-6100	Proprietary Trading

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CIBC World Markets Corp.	8/18/2008	11/15/2010	NA	NA	2/14/1973	NA	Member / TPH	425 Lexington Avenue New York, NY 10017	212-856-4000	Proprietary
Citadel Securities, LLC	10/23/2008	10/1/2010	5/14/2010	5/14/2010	4/17/2002	10/7/2010	Member / TPH	131 S Dearborn Street 32nd Floor Chicago, IL 60603	312-395-2100	Market Maker
Citi Order Routing and Execution, LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	10/1/2008	9/24/2010	Member / TPH	11 Ewall Street Mount Pleasant, SC 29464	843-789-2080	Proprietary
Ciligroup Derivatives Markets, Inc.	NA	NA	NA	NA	12/3/2004	2/25/2011	Member / TPH	130 Cheshire Lane Suite 102	212-723-2960	
Ciligroup Global Markets, Inc.	9/24/2008	12/15/2010	5/25/2010	5/27/2010	5/2/2011	NA	Member / TPH	Minnetonka, MN 55305 390-388 Greenwich Street New York, NY 10013	212-816-6000	Full Service
Clarksons Platou Securities, Inc.	NA	NA	1/15/2015	NA	NA	NA	Member / TPH	280 Park Avenue 21st Floor New York, NY 10017	212-317-7080	Public Customer Business
Clearpool Execution Services, LLC	5/15/2014	5/15/2014	6/16/2014	6/16/2014	NA	NA	Member / TPH	17 State Street 38h Floor New York, NY 10004	212-531-8500	Public Customer Business
CLSA Americas, LLC	NA	NA	5/21/2013	5/21/2013	NA	NA	Member / TPH	1301 Avenue of the Americas 15th Floor New York, NY 10019	212-549-5097	Agency
CMT Fund XXV Limited	7/2/2012	7/2/2012	NA	NA	NA	NA	Sponsored Participant	500 West 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	Proprietary
CMZ Trading LLC	NA	NA	NA	NA	10/1/2004	NA	Member / TPH	141 W Jackson Boulevard Suite 826 Chicago, 1L 60604	312-604-3310	
CODA Markets, Inc.	10/15/2008	10/4/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	2624 Patriot Boulevard Glenview, IL 60026	224-521-2700	ATS
Cognitive Capital, LLC	NA	NA	NA	NA	5/13/2004	NA	Member / TPH	141 W Jackson Boulevard Suite 1620 Chicago, IL 60604	312-431-0400	
Comhar Capital Markets, LLC	2/27/2017	NA	NA	NA	NA	NA	Member / TPH	311 S Wacker Drive Suite 2280A Chicago, IL 60606	872-205-0190	Firm Proprietary Trading
Compass Professional Services, LLC	6/15/2011	NA	NA	10/1/2015	4/12/2005	9/24/2010	Member / TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	Proprietary
Consolidated Trading LLC	NA	NA	NA	NA	1/2/2002	NA	Member / TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	
COR Clearing, LLC	10/15/2009	NA	NA	NA	NA	NA	Member / TPH	1200 Landmark Center 1299 Farnam Street Suite 800 Omaha, NE 68102	402-384-6100	Clearing Firm
Cowen and Company, LLC	8/18/2008	10/7/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	599 Lexington Avenue 20th Floor New York, NY 10022	646-562-1010	Market Maker
Cowen Execution Services, LLC	10/15/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	1633 Broadway 48th Floor New York, NY 10019	800-367-8998	Full Service
Cowen Prime Services, LLC	3/15/2011	3/15/2011	NA	NA	NA	NA	Member / TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Agency
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	Full Service
Critical Trading, LLC	7/1/2014	. NA	NA	NA	NA	NA	Member / TPH	120 W 45th Street 15th Floor New York, NY 10036	646-918-0529	Firm Proprietary Trading/Market Maker
CSS, LLC	NA	NA	NA	NA	8/21/1998	NA	Member / TPH	175 W Jackson Boulevard Suite 440 Chicago, IL 60604	312-542-8505	
CTC, LLC	NA	NA	NA	NA	3/25/1998	3/3/2011	Member / TPH	440 S LaSalle Street 4th Floor Chicago, IL 60605	312-863-8000	
Cutler Group, LP	4/1/2010	10/6/2010	NA	10/16/2015	4/5/1999	NA	Member / TPH	101 Montgomery Street Suite 700 San Francisco, CA 94104	415-293-3956	Market Maker
DART Executions, LLC	8/18/2008	10/1/2010	5/25/2010	5/27/2010	1/2/2008	10/20/2010	Member / TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5400	Proprietary
Dash Financial Technologies, LLC	10/23/2008	7/2/2012	6/9/2010	6/9/2010	5/19/2000	9/30/2010	Member / TPH	311 S Wacker Drive Suite 1000 Chicago, IL 60606	312-986-2006	Market Maker
Deutsche Bank Securities, Inc.	10/15/2008	10/11/2010	5/21/2010	5/21/2010	4/25/1996	8/15/2011	Member / TPH	60 Wall Street New York, NY 10005	212-250-2500	Full Service
DRW Securities, LLC	9/1/2009	11/1/2010	5/25/2010	5/27/2010	11/23/1998	1/22/2016	Member / TPH	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1000	Proprietary / Market Maker
E*TRADE Securities, LLC	NA	NA	NA	6/10/2010	NA	NA	Member / TPH	11 Times Square 32nd Floor New York, NY 10036	646-521-4300	Agency
EG Market Technologies, LLC	4/3/2017	4/3/2017	4/3/2017	4/3/2017	NA	NA	Member / TPH	767 5th Avenue 45th Floor New York, NY 10153	646-757-2831	Proprietary / Market Maker
Electronic Transaction Clearing, Inc.	10/23/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	660 S Figueroa Street Los Angeles, CA 90017	949-533-1885	Market Maker
Equitec Proprietary Markets LLC	NA	NA	NA	NA	6/1/2001	NA	Member / TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	
Essex Radez, LLC	2/17/2009	10/1/2010	5/10/2010	5/14/2010	NA	NA	Member / TPH	440 S LaSalle Street Suite 1111 Chicago, IL 60605	312-212-1815	Service Bureau
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 US Institutional Trading, LLC	NA	NA	6/1/2016	NA	NA	NA	Member / TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Riskless Principal
Flow Traders US, 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	Hedge Fund
G1 Execution Services, LLC	8/18/2008	12/1/2010	4/17/2010	4/17/2010	NA	NA	Member / TPH	175 W Jackson Boulevard Suite 1700 Chicago, IL 60604	312-362-0404	Market Maker
G2 Trading, LLC	6/1/2016	NA	NA	NA	NA	NA	Member / TPH	325 S Sangamon Street Chicago, IL 60607	404-697-9915	Firm Proprietary Trading Options Market Making
Gelber Securities, LLC	5/1/2015	NA	NA	NA	NA	NA	Member / TPH	350 N Orleans Street 7th Floor Chicago, IL 60654	312-408-4354	Firm Proprietary Trading

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Geneva Stock, LLC	NA	NA	NA	NA	4/6/2001	NA	Member / TPH	440 S LaSalle Street Suite 1711 Chicago, IL 60605	312-362-4404	
Glenn Smith Trading LLC	NA	NA	NA	NA	9/9/2010	NA	Member / TPH	995 Ridgewood Drive Chicago, IL 60185	630-346-8739	
Global Execution Brokers, LP	2/1/2010	10/5/2010	12/1/2015	10/15/2015	12/23/2003	9/24/2010	Member / TPH	401 City Avenue Bala Cynwyd, PA 19004	610-617-2600	Institutional
Global HFT Management, LLC	10/1/2010	NA	NA	NA	NA	NA	Sponsored Participant	800 Third Avenue New York, NY 10022	212-813-0870	Proprietary
Global Liquidity Partners, LLC	4/21/2011	5/15/2012	NA	NA	NA	NA	Sponsored Participant	12 Broad Street Suite 201 Redbank, NJ 07701	773-459-4665	Agency
Goldman Sachs & Co. LLC	10/23/2008	10/12/2010	5/14/2010	5/14/2010	2/21/1973	10/8/2010	Member / TPH	200 West Street New York, NY 10282	212-902-1000	Full Service
Goldman Sachs Execution & Clearing, LP	10/15/2008	10/1/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	200 West Street New York, NY 10282	212-902-1000	Full Service
Gordon Haskett Capital Corporation	NA	NA	NA	5/2/2016	NA	NA	Member / TPH	441 Lexington Avenue 10th Floor New York, NY 10017	212-883-0600	Agency
Green Street Trading, LLC	11/1/2011	NA	NA	NA	NA	NA	Member / TPH	660 Newport Center Drive Suite 800 Newport Beach, CA 92660	214-749-4730	Agency
Group One Trading, LP	6/2/2015	NA	NA	9/29/2015	11/23/1994	NA	Member / TPH	440 S. LaSalle Street Suite 3232 Chicago, IL 60605	312-347-8864	Options Market Maker
GSN North America, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member / TPH	520 Madison Avenue New York, NY 10022	212-659-6292	Agency
GTS Securities, LLC	12/17/2013	5/1/2012	6/2/2014	6/2/2014	NA	NA	Member / TPH	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Proprietary
Hainey Investments Limited	6/16/2014	NA	NA	NA	NA	NA	Sponsored Participant	Themistoki Dervi 41 #806-807 Nicosia, Cyprus	704-248-8221	Proprietary
HAP Trading, LLC	10/1/2009	11/15/2010	NA	6/2/2010	3/16/2001	NA	Member / TPH	33 Whitehall Street 6th Floor New York, NY 10004	212-380-5186	Proprietary
Hardcastle Trading USA, LLC	4/15/2009	NA	5/25/2010	5/27/2010	5/16/2005	NA	Member / TPH	755 Secaucus Road Suite F-1110 Secaucus, NJ 07094	201-305-8817	Proprietary
Henning-Carey Proprietary Trading, LLC	8/15/2012	NA	NA	NA	NA	NA	. Sponsored Participant	141 W. Jackson Boulevard Suite 1801 Chicago, IL 60604	312-789-8764	Proprietary
Highbridge Capital Management, LLC	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	9 West 57th Street 27th Floor New York, NY 10019	212-287-4900	Proprietary
Hilltop Securities, Inc.	10/23/2008	9/1/2010	NA	5/21/2013	10/1/2010	10/13/2010	Member / TPH	1201 Elm Street Suite 3500 Dallas, TX 75270	214-859-5125	Clearing Firm
HRT Financial, LLC	2/1/2010	10/1/2010	5/18/2010	5/18/2010	1/24/2011	1/24/2011	Member / TPH	32 Old Slip 30th Floor New York, NY 10005	212-293-1927	Proprietary
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, 12th Floor New York, NY 10018	224-880-7116	Broker-Dealer
HTG Capital Partners, LLC	10/3/2016	10/3/2016	10/3/2016	10/3/2016	NA	NA	Sponsored Participant	601 South LaSaile Street 2nd Floor Chicago, IL 60605	312-327-4112	Proprietary
Hybrid Trading & Resources, LLC	NA	NA	NA	NA	3/22/2005	NA	Member / TPH	111 W Jackson Boulevard Suite 1146 Chicago, IL 60604	312-427-1585	
ICAP Corporates, LLC	NA	NA	3/28/2013	NA	NA	NA	Member / TPH	Harborside Financial Center 1100 Plaza 5, 12th Floor Jersey City, NJ 07311	212-341-9950	Agency
IEX Services, LLC	10/1/2013	10/1/2013	9/24/2013	9/24/2013	NA	NA	Member / TPH	7 World Trade Center 30th Floor New York, NY 10007	646-568-2337	ATS
IMC Financial Markets	8/18/2008	10/1/2010	5/25/2010	5/27/2010	7/5/2000	9/24/2010	Member / TPH	233 South Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3320	Proprietary
Industrial and Commercial Bank of China Financial Services, LLC	5/15/2014	5/15/2014	NA	NA	NA	NA	Member / TPH	1633 Broadway New York, NY 10019	212-300-8520	Clearing Services
Instinet, LLC	8/18/2008	9/1/2010	5/14/2010	5/14/2010	12/29/2009	10/6/2010	Member / TPH	1095 Avenue of the Americas New York, NY 10036	212-310-4097	Agency
Interactive Brokers Corp.	NA	NA	NA	NA	4/21/2009	10/6/2010	Member / TPH	8 Greenwich Office Park Greenwich, CT 06831 One Pickwick Plaza	203-618-5700	
Interactive Brokers, LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	One Pickwick Plaza 2nd Floor Greenwich, CT 06830 525 Washington Boulevard	203-618-5870	Full Service
International Correspondent Trading, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member / TPH	Suite 2401 Jersey City, NJ 07310	201-222-9300	Agency
Israel A. Englander & Co., LLC	NA	NA	NA	NA	10/27/1995	2/14/2011	Member / TPH	666 5th Avenue 14th Floor New York, NY 10103	212-841-4567	
ISTRA, LLC	12/15/2011	12/15/2011	NA	NA	NA	NA	Sponsored Participant	230 Park Avenue 10th Floor New York, NY 10169 601 S. LaSalle Street	718-618-4929	Proprietary
ITG Derivatives, LLC	8/18/2008	11/15/2010	NA	11/12/2015	2/1/2008	10/26/2010	Member / TPH	601 S. LaSalle Street Suite 300 Chicago, IL 60605 One Liberty Plaza	312-334-8042	Market Maker
ITG, Inc.	8/18/2008	10/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	165 Broadway, 4th Floor New York, NY 10006	212-444-6259	Agency
J.P. Morgan Securities, LLC	8/18/2008	9/15/2010	5/14/2010	5/14/2010	10/29/1985	11/18/2010	Member / TPH	383 Madison Avenue New York, NY 10179	212-622-5504	Full Service
Jane Street Capital, LLC	5/1/2009	11/15/2010	5/14/2010	5/14/2010	9/4/2012	NA	Member / TPH	One New York Plaza New York, NY 10004	212-651-6060	Agency / Proprietary
Jane Street Options, LLC	4/15/2016	NA	NA	NA	5/2/2005	NA	Member / TPH	New York, NY 10004	2112-651-6020	Proprietary / Market Maker
Jane Street Options, LLC	1/3/2012	NA	NA	NA	NA	NA	Sponsored Participant	One New York Plaza New York, NY 10004	212-651-6969	Proprietary
Jefferies Execution Services, Inc.	8/26/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	520 Madison Avenue New York, NY 10022	646-805-5415	Full Service
Jefferies Investment Advisers	7/1/2011	7/15/2011	NA	NA	NA	NA	Sponsored Participant	520 Madison Avenue New York, NY 10022	212-323-3993	Full Service
Jefferies, LLC	10/23/2008	10/19/2010	5/25/2010	5/27/2010	7/9/2012	7/18/2012	Member / TPH	520 Madison Avenue New York, NY 10022	212-323-3987	Full Service

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JNK Securities Corp.	11/17/2008	11/15/2010	NA	NA	NA .	NA	Member / TPH	902 Broadway 20th Floor New York, NY 10010	212-885-6311	Agency
Juliet Group, LLC	3/1/2011	3/1/2011	NA	NA	NA	NA	Sponsored Participant	240 E. 35th Street #3A	646-360-0595	Proprietary
Juliet Labs, LLC	9/20/2017	9/20/2017	9/20/2017	9/20/2017	NA	NA	Sponsored Participant	New York, NY 10016 1 Northside Piers, 14H Brookly, NY 11249	646-360-0595	Proprietary
Jump Trading, LLC	8/18/2008	10/1/2010	5/14/2010	5/14/2010	4/2/2012	6/6/2017	Member / TPH	600 West Chicago Avenue Suite 825 Chicago, IL 60654	312-930-9603	Proprietary
Keefe Bruyette & Woods, Inc.,	8/18/2008	12/1/2010	6/8/2010	6/8/2010	NA	ŅĄ	Member / TPH	787 7th Avenue New York, NY 10019	212-887-8965	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	
Lamberson Capital LLC	NA	NA	NA	NA	3/23/2016	NA	Member / TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	
Lampert Capital Markets, Inc.	NA	2/18/2014	2/26/2014	NA	NA	NA	Member / TPH	477 Madison Avenue Suite 230 New York, NY 10022	(646) 367-4660	Introducing Broker
Lampost Capital, LC	NA .	NA	NA	3/15/2016	NA	NA	Member / TPH	7777 W. Glades Road Suite 213 Boca Raton, FL 33434	(561) 883-0454	Proprietary and Public Customer Business
Latour Trading, LLC	8/17/2009	10/1/2010	5/26/2010	5/27/2010	4/8/2011	NA	Member / TPH	377 Broadway 10th Floor New York, NY 10013	917-388-8625	Proprietary
Leerink Partners, LLC	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	1 Federal Street 37th Floor Boston, MA_02110	800-808-7525	Agency
LEK Securities Corporation	8/18/2008	10/1/2010	5/26/2010	5/27/2010	1/9/2001	9/24/2010	Member / TPH	1 Liberty Plaza 165 Broadway, 52nd Floor New York, NY 10006	212-509-2300	Agency
Lightspeed Trading, LLC	8/18/2008	11/15/2010	5/19/2010	5/19/2010	NA	NA	Member / TPH	1001 Avenue of the Americas 16th Floor New York, NY 10018	646-393-4814	Proprietary
Lime Brokerage, LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	6/24/2010	NA	Member / TPH	625 Broadway 12th Floor New York, NY 10012	212-219-6086	Agency
Liquidnet, Inc.	9/1/2009	9/15/2010	NA	NA	NA	NA	Member / TPH	498 7th Avenue 12th Floor New York, NY 10018	646-660-8310	Institutional
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	
Macquarie Capital (USA), Inc.	12/1/2009	NA	5/26/2010	5/27/2010	NA	NA	Member / TPH	125 West 55th Street Level 22 New York, NY 10019	212-231-2501	Agency
Marathon Trading Group, LLC	2/13/2015	NA	NA	NA	1/30/2013	NA	Member / TPH	100 Matsonford Road Building 3, Suite 240 Wayne, PA 19087	610-254-4890	Options Market Maker
Match-Point Securities, LLC	NA	NA	NA	11/16/2015	NA	NA	Member / TPH	303 East 57th Street, 26L New York, NY 10022 141 W Jackson Boulevard	917-359-5734	Public Customer Business
Meadowhawk Capital LLC	NA	NA	NA	NA	6/1/2007	NA	Member / TPH	Suite 3750 Chicago, IL 60604 One Bryant Park	773-837-2612	
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	NY1-100-06-01 New York, NY 10036	312-260-5601	Clearing Firm
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8/18/2008	10/4/2010	5/14/2010	5/14/2010	4/25/1973	9/27/2010	Member / TPH	One Bryant Park New York, NY 10036 320 Park Avenue	212-449-6090	Full Service
Mizuho Securities USA, LLC	6/1/2010	1/3/2011	NA	NA	NA	NA	Member / TPH	12th Floor New York, NY 10022 300 First Stamford Place	212-209-9338	Agency
MKM Partners, LLC	8/3/2009	NA	5/14/2010	5/14/2010	· NA	NA	Member / TPH	4th Floor East Wing Stamford, CT 06902 141 W Jackson Boulevard	203-987-4005	Agency
MNR Executions LLC	NA	NA	NA	NA	4/30/2008	NA	Member / TPH	Suite 3900 Chicago, IL 60604 1845 Walnut Street	312-878-4704	
Monadnock Capital Management, LP	NA	NA	5/26/2010	NA	12/1/2014	NA	Member / TPH	Suite 940 Philadelphia, PA 19103	215-405-7280	Proprietary / Market Maker
Moors & Cabot, Inc.	· NA	4/2/2012	NA	NA	NA	NA	Member / TPH	111 Devonshire Street Boston, MA 02109 20 Bank Street	617-314-0295	Agency
Morgan Stanley & Co. International plc	NA	NA	NA	NA	4/12/2017	NA	Sponsored Participant	Canary Wharf London, UK E14 4A		
Morgan Stanley & Co., LLC	10/23/2008	9/1/2010	5/14/2010	5/14/2010	8/20/1980	9/24/2010	Member / TPH	1585 Broadway New York, NY 10036 One Liberty Plaza	212-761-9324	Full Service
NASDAQ Execution Services, LLC	8/19/2008	9/1/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	165 Broadway New York, NY 10006	212-231-5177	Exchange
National Financial Services, LLC	10/23/2008	10/4/2010	5/26/2010	5/27/2010	10/8/1987	4/16/2012	Member / TPH	200 Seaport Boulevard Boston, MA 02210 1001 Fourth Avenue		Retail / Agency
National Securities Corporation	7/1/2009	NA	NA	NA	NA	NA	Member / TPH	Suite 3750 Seattle, WA 98154	212-417-3636	
Needham & Company, LLC	10/23/2008	10/1/2010	NA	NA	NA	NA	Member / TPH	445 Park Avenue New York, NY 10022 Worldwide Plaza		Market Maker
Nomura Securities International, Inc.	10/23/2008	10/1/2010	5/26/2010	5/27/2010	9/1/2009	11/16/2010	Member / TPH	309 West 49th Street New York, NY 10019	212-667-9131	Institutional
Northern Trust Securities, Inc.	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	50 South LaSalle Street Chicago, IL 60603 45 South 7th Street	312-630-6045	Market Maker
Northland Securities, Inc.	12/15/2010	12/15/2010	NA	NA	NA	NA	Member / TPH	20th Floor Minneapolis, MN 55402 314 West Superior	612-851-5934	
Old Mission Capital, LLC	4/16/2012	4/16/2012	4/25/2012	4/25/2012	9/27/2017	NA	Member / TPH	Suite 200 Chicago, IL 60654 2 Stamford Plaza	617-642-6120	Proprietary
Olivetree Financial, LLC	NA	NA	9/1/2016	NA	NA	NA	Member / TPH	281 Tresser Blvd, Suite 501 Stamford, CT 06901 85 Broad Street		Agency Execution
Oppenheimer & Co. Inc.	NA	NA	NA	NA	5/17/1973	NA	Member / TPH	22nd, 24th Floors New York, NY 10004 130 East Randolph Street	212-668-8000	
Optiver US, LLC	6/15/2009	NA	NA	NA	6/1/2005	9/24/2010	Member / TPH	13th Floor Chicago, IL 60601 430 Park Avenue		Proprietary / Market Maker
Oscar Gruss & Son Incorporated	8/7/2017	NA	NA	NA	NA	NA	Member / TPH	6th Floor New York, NY 10022	212-419-4005	Institutional Agency Trading Business

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OTA, LLC	8/18/2008	10/7/2010	NA	NA	NA	NA	Member / TPH	One Manhattanville Road Purchase, NY 10577	914-460-407	Institutional
PEAK6 Capital Management, LLC	8/1/2014	NA	NA	12/2/1997	12/2/1997	NA	Member / TPH	141 W. Jackson Blvd. Suite 500 Chicago, JL 60604	312-362-235	Proprietary Trading
PEAK6 Capital Management, LLC	11/3/2008	7/15/2011	NA	NA	NA	NA	Sponsored Participant	141 W. Jackson Blvd. Suite 500 Chicago, IL 60604	312-362-240	Market Maker
Penserra Securities, LLC	8/18/2008	10/6/2010	NA	NA	NA	NA	Member / TPH	140 Broadway 26th Floor New York, NY 10005	212-607-3190	Agency
Pershing, LLC	8/18/2008	9/15/2010	5/26/2010	5/27/2010	2/21/1973	9/28/2010	Member / TPH	One Pershing Place Jersey City, NJ 07399	201-413-2826	Agency
Pictet Overseas, Inc.	6/1/2015	6/1/2015	5/26/2010	5/27/2010	NA	NA	Member / TPH	1000 de la Gauchetlere Ouest Suite 3100 Montreal, Ouebec H3B 3W5	514-350-6263	Agency
Piper Jaffray & Co.	10/15/2008	11/15/2012	5/14/2010	5/14/2010	NA	NA	Member / TPH	800 Nicollet Mall Minneapolis, MN 55402	612-303-2211	Market Maker
Potamus Trading, LLC	4/15/2013	4/15/2013	4/11/2013	4/11/2013	NA	NA	Member / TPH	2 Seaport Lane 5th Floor Boston, MA 02210	617-855-8721	Proprietary / Market Maker
Princeton Alpha Management, LP	12/1/2015	12/1/2015	12/1/2015	12/1/2015	NA	NA	Sponsored Participant	61 Princeton Hightstown Rd West Windsor, NJ 08550	609-269-9212	Agency
PTR, Incorporated	NA	NA	NA	NA	8/2/1995	NA	Member / TPH	1800 JFK Boulevard Suite 401 Philadelphia, PA 19103	267-909-8368	
Puma Capital, LLC	NA	NA	6/15/2016	6/15/2016	NA	NA	Member / TPH	287 Bowman Avenue 3rd Floor Purchase, NY 10577	212-896-2844	Proprietary Trading
Pundion, LLC	2/27/2017	2/27/2017	2/27/2017	2/27/2017	NA	NA	Member / TPH	230 Park Avenue 10th Floor New York, NY 10169	917-7203332	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	646-214-5608	Clearing Firm
Quantiab Securities, LP	8/18/2008	11/1/2010	5/26/2010	5/27/2010	10/5/2010	8/2/2011	Member / TPH	4200 Montrose Boulevard Suite 200 Houston, TX 77006	713-333-3704	Proprietary
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	
Rackson Asset Management, LLC	10/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	2000 Broadway Suite 22C New York, NY 10023	212-724-2567	Proprietary
Rainier Investment Management, Inc.	1/4/2010	NA	NA	NA	NA	NA	Sponsored Participant	601 Union Street Suite 2801 Seattle, WA 98101	206-518-6658	Hedge Fund
RBC Capital Markets, LLC	9/18/2008	10/14/2010	5/14/2010	5/14/2010	11/24/1993	10/19/2010	Member / TPH	3 World Financial Center 200 Vesey Street New York, NY 10281	612-373-1680	Market Maker
RGM Securities, LLC	8/3/2009	10/1/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	221 West 6th Street Suite 2030 Austin, TX 78701	512-807-5302	Proprietary
River Cross Securities, LLLP	5/1/2009	10/5/2010	NA	NA	NA	NA	Member / TPH	401 City Avenue Suite 912 Bala Cynwyd, PA 19004	610-747-2333	ATS
Robert W. Baird & Co., Incorporated	10/23/2008	1/3/2011	NA	NA	NA	NA	Member / TPH	777 East Wisconsin Avenue Milwaukee, WI 53202	414-765-3910	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	
Rosenblatt Securities, Inc.	8/18/2008	10/6/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	20 Broad Street 26th Floor New York, NY 10005	212-943-5225	Agency
Roth Capital Partners, LLC	8/18/2008	NA	NA	NA	NA	NA		888 San Clemente Suite 150 Newport Beach, CA 92660	949-720-5708	Market Maker
RW Pressprich & Co.	2/17/2009	11/15/2010	<u>6/2/2010</u>	6/2/2010	NA	NA		4521 Fifth Avenue New York, NY 10018	212-832-6254	Agency
SAC Capital Advisors, LP	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	72 Cummings Point Road Stamford, CT 06902	203-890-2275	Hedge Fund
Safra Securities, LLC	NA	NA	5/26/2010	5/27/2010	NA	NA		546 Fifth Avenue New York, NY 10036 One Embarcadero Center	212-704-5524	Market Maker
SageTrader, LLC	3/1/2016	6/5/2017	6/5/2017	6/1/2016	NA	NA	Member / TPH	Suite 1150 San Francisco, CA 94111 401 City Avenue	646-663-1084	Public Customer Business
SAL Equity Trading, GP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	Suite 220 Bala Cynwyd, PA 19004	610-617-2996	Institutional / Agency
Sanford C. Bernstein & Co, LLC	9/10/2008	10/21/2010	5/26/2010	5/27/2010	8/13/2013	NA	Member / IPH	1345 Ave of the Americas New York, NY 10105	212-823-2896	Agency
Santander Investment Securities, Inc.	4/15/2009	1/3/2011	NA [«]	NA	NA -	NA	Member / TPH	45 East 53rd Street New York, NY 10022 1 Liberty Plaza	212-350-3659	Institutional
Scotia Capital (USA), Inc.	3/2/2009	9/15/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	165 Broadway New York, NY 10006	212-225-6705	Institutional
Scottrade, Inc.	6/1/2010	11/15/2010	5/26/2010	5/27/2010	NA	NA		12800 Corporate Hill Drive St. Louis, MO 63131 805 Third Avenue	x.6402	Retail
Seven Points Capital, LLC	NA	NA	5/14/2010	NA	NA	NA	Member / TPH	15th Floor New York, NY 10022	212-760-0760	Agency
SG Americas Securities, LLC	9/17/2008	11/15/2011	5/14/2010	5/14/2010	4/23/2004	1/2/2015	Member / IPH	245 Park Avenue New York, NY 10167	212-278-5232	Proprietary
Silver Fern Investments, LLC	8/20/2015	8/20/2015	8/20/2015	8/20/2015	NA	NA	Participant	533 2nd Street Encinitas, CA 92024 230 S. LaSalle Street	858-947-8650	Proprietary
Simplex Trading, LLC	3/16/2015	NA	NA	4/13/2017	8/12/2010	3/1/2017	Member / TPH	Suite 4-100 Chicago, IL 60604 277 Park Avenue	312-360-2440	Proprietary Institutional Equity
SMBC Nikko Securities America, Inc.	8/7/2017	8/7/2017	8/7/2017	8/7/2017	NA	NA	Member / TPH	Fifth Floor New York, NY 10172 11 Broadway		Fixed Income Institutional Banking
SogoTrade, Inc.	NA	NA	NA	6/19/2017	NA	NA	Member / TPH	Suite 514 New York, NY 10004 111 W Jackson Boulevard	646-885-6846	Public Customer Business
Sphinx Trading, LP	NA	NA	NA	NA	12/20/1989	. NA	Member / TPH		312-692-5076	
Spot Trading, LLC	6/1/2012	NA	1/25/2013	1/25/2013	8/20/1999	7/26/2012	Member / TPH		312-362-4569	Proprietary

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Stifel Nicolaus & Company, Incorporated	8/18/2008	NA	6/2/2010	6/2/2010	NA	NA	Member / TPH	501 North Broadway St. Louis, MO 63102	410-454-4096	Agency
Stock USA Execution Services, Inc.	NA	NA	5/26/2010	5/27/2010	NA	NA	Member / TPH	1717 Route 6 Suite 102 Carmel, NY 10542	845-531-2631	Agency
Stuyvesant Trading Group, LLC	8/15/2013	NA	NA	NA	NA	NA	Member / TPH	100 Wall Street Suite 604-A New York, NY 10005	212-433-7124	Market Maker
summit Securities Group, LLC	7/16/2012	, 7/16/2012	8/20/2012	8/20/2012	6/6/2012	NA	Member / TPH	2 Rector Street 16th Floor New York, NY 10006	646-651-4380	Proprietary
Sumo Captial, LLC	7/15/2013	NA	NA	10/15/2015	3/3/2008	NA	Member / TPH	440 S LaSalle Street	212-433-7667	Proprietary
Sun Trading, LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	9/3/2013	NA	Member / TPH	100 South Wacker	312-924-4751	Proprietary
Susquehanna Financial Group, LLLP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	401 City Avenue	610-617-2999	Institutional / Agency
Susquehanna Investment Group	NA	NA	NA	NA	5/1/1987	NA	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2600	
Susquehanna Securities	10/15/2014	10/15/2014	10/15/2014	10/15/2014	4/4/1994	9/24/2010	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2618	Proprietary
Synergy Capital Management, LLC	8/1/2016	. NA	NA	NA	6/5/2007	NA	Member / TPH	141 W. Jackson Boulevard Suite 1350 Chicago, IL 60604	312-986-8869	Market Maker
ID Ameritrade Clearing, Inc.	5/3/2011	5/3/2011	NA	5/27/2010	NA	NA	Member / TPH	200 South 108th Avenue Omaha, NE 68154	402-970-5271	Agency
Telsey Advisory Group, LLC	1/24/2011	8/15/2014	NA	NA	NA	NA	Member / TPH	535 Fifth Avenue 12th Floor New York, NY 10017	212-584-4628	Agency
fewksbury 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
Fewksbury Investment Fund, Ltd.	7/1/2011	7/1/2011	1/6/2015	1/6/2015	NA	NA	Sponsored Participant	Washington Mall I 20th Church Street, 4th Floor Hamilton, HM 11 Bermuda	610-971-5000	Proprietary
Themis Trading, LLC	8/18/2008	10/1/2010	NA	NA	NA	NA	Member / TPH	10 Town Square Suite 100 Chatham, NJ 07928	866-384-3647	Agency
ThinkTrade, LLC	2/1/2010	10/20/2010	1/9/2015	1/9/2015	NA	NA	Sponsored Participant	2210 Encintas Boulevard Suite I Encintas, CA 92024	760-452-2451	Proprietary
Timber Hill, LLC	2/16/2010	NA	NA	NA	12/27/1996	12/15/2010	Member / TPH	One Pickwick Plaza Suite 200 Greenwich, CT 06830	203-618-5806	Market Maker